



United States Department of Agriculture

Red River Gorge Management Planning

Draft Environmental Assessment and Finding of No Significant Impact



Forest Service

Cumberland Ranger District, Daniel Boone
National Forest, Kentucky

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Red River Gorge Management Planning



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Environmental Assessment

Purpose of and Need for the Proposed Action

The Red River Gorge¹ on the Daniel Boone National Forest (the forest) in Kentucky is experiencing increasing levels of recreational use and overcrowding (Sharp 2014, USDA Forest Service 2014, USDA Forest Service 2018). As a result, many of the natural and cultural resources have sustained or are under threat of sustaining varying degrees of impairment, wear, damage, and vandalism from proliferation of unauthorized campsites and trails, renegade parking impacts to road infrastructure, abandoned campfires and wildfires, and other user impacts. Additionally, recent flooding events brought to the forefront concerns about climate change and the need to build infrastructure strategically and improve resource resiliency for future large weather events. The Gorge needs proactive and adaptive management of these resources with planning to address visitor use and protect these resources for the future.

The 19.4 mile segment of the Red River that was designated by Congress in the Red River Designation Act of 1993 (P.L. 95-625) as a national wild and scenic river flows through the Clifty Wilderness and Red River Gorge Geological Area and is experiencing increasing visitor use and impacts to resources and river values (USDA Forest Service 2021b).

We developed this project and proposed activities for the following reasons:

1. To address impacts from overuse and overcrowding while providing for recreation opportunities in the Gorge;
2. To develop a comprehensive river management plan and final river boundaries to protect and enhance the values for which the Red River was designated as a wild and scenic river, including free flow, water quality, and outstandingly remarkable values; and
3. To identify and implement Forest Service management actions needed to protect the values present.

Management actions are needed both along the river corridor and in the wider Gorge to address and prevent further resource impacts, to protect and enhance the river values, to promote visitor safety, and to provide sustainable recreation opportunities along the river corridor.

The Limits of Acceptable Change (LAC) process, which concluded in 2008, engaged citizens with diverse interests in management throughout the Gorge. This collaborative effort addressed user impacts in the Gorge and identified thresholds when management actions would need to be taken to protect and enhance the resources in the Gorge, including along the Red River. Stewardship of the Gorge has been predominately guided by the results from this process. Numerous EPA 319(h) grants have been awarded to the forest since the LAC process to address non-point source pollution, primarily sediment that originates from heavily used areas. These grants have enabled us to rehabilitate numerous user-developed campsites and trails, hire a local watershed coordinator, provide septic systems to local landowners, clean up trash, plant riparian vegetation, and provide education about clean water to the public.

¹ The 42,739-acre project area includes approximately 30,484 acres of the Red River Gorge Geological Area, 12,380 acres of the Clifty Wilderness and 10,254 acres in the Indian Creek area, along with the Red Wild and Scenic River overlap with the Red River Gorge Geological Area within the project boundary. All estimated acreages for this project are based on recent GIS exercises using current maps and technology. The project area on the Cumberland District of the Daniel Boone National Forest (the forest), as described above and depicted below in figure 1, will collectively be referred to as “the Gorge”.



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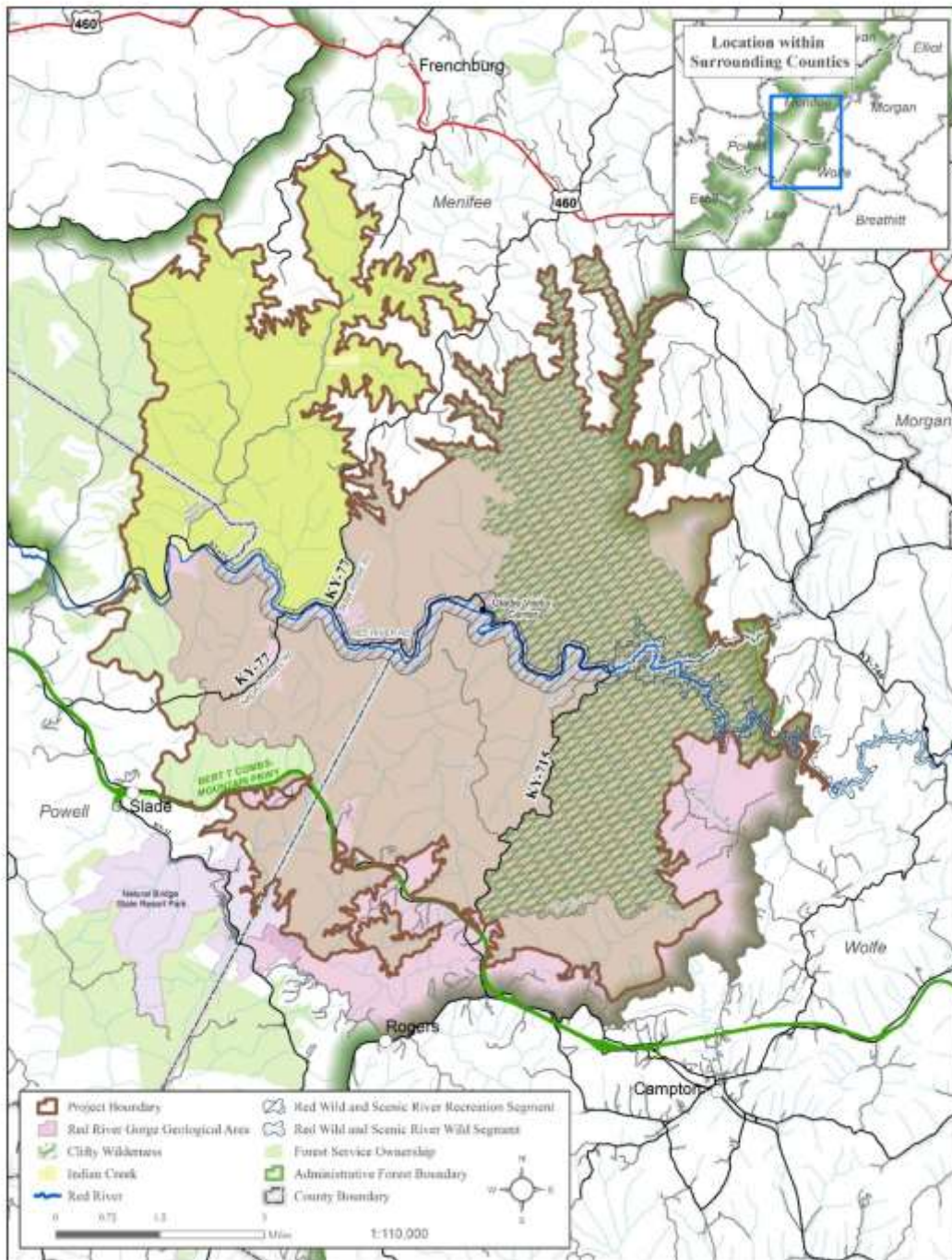
A comprehensive river management plan is required for all congressionally designated wild and scenic rivers. To comply with the Wild and Scenic Rivers Act, the comprehensive river management plan and associated boundary package must:

- Establish the final river corridor boundary to facilitate the protection and enhancement of the outstandingly remarkable values, within the limits set in the Wild and Scenic Rivers Act;
- Address current conditions and other management practices, as required by law;
- Protect and enhance outstandingly remarkable values;
- Protect and maintain the river's water quality and free-flowing condition;
- Determine types and amounts of uses (visitor capacity) that the river can support while protecting river values;
- Inform future management actions within the designated portion of the Red Wild and Scenic River corridor; and,
- Develop a monitoring strategy to help improve or maintain desired conditions.

The proposed action, including the comprehensive river management plan (USDA Forest Service 2021a), will help to achieve relevant desired conditions from the 2004 Daniel Boone National Forest Land and Resource Management Plan (forest plan). This includes desired future conditions, goals, and objectives for forestwide recreation management (pp 2-21 through 2-22), developed recreation sites (pp. 3-47 through 3-49), the Red Wild and Scenic River (pp. 3-53 through 3-54 and pp. 3-58 through 3-60), the Red River Gorge Geological Area (pp. 3-67 through 3-69), the Clifty Wilderness (pp. 3-39 through 3-42) and overlapping prescription areas such as cliffline community (pp. 3-5 through 3-8), riparian corridors (pp. 3-10 through 3-16), rare community (pp. 3-17 through 3-25), significant bat caves (pp. 3-29 through 3-30), and habitat diversity interest (pp. 3-31 through 3-38).

Project Vicinity Map

Figure 1. Red River Gorge Management Planning Project Boundary and Vicinity Map²





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Proposed Action

The following proposed actions are in accordance with the forest plan and Limits of Acceptable Change recommendations and include a variety of activities to implement a land management plan. This project is subject to a pre-decisional objection process (36 CFR 218 Subparts A and B). Proposed activities address user impacts while providing sustainable recreation opportunities in the project area and protecting and enhancing the values for which the Red River was designated. While some of the actions proposed are site-specific, others are proposed using an adaptive management framework. Adaptive management provides an implementation tool that allows a desired future condition to be established, the initial management actions that can be used, and adjustments or additional actions that can be taken if needed to achieve the desired future condition. Many of the proposed actions identify an "up to" or maximum³ and do not specify the exact locations where the action will occur, which provides flexibility to account for inaccurate initial assumptions, to adapt to environmental conditions, and to respond to subsequent monitoring information. We provide design elements in [Appendix A](#) to bound where the actions would generally occur, ensure that the resources are protected, and guide implementation. Field surveys will assess current conditions and provide site-specific information prior to implementation. Design elements also identify monitoring methods to be used to determine effectiveness of actions and trigger modification of actions as needed to meet intended effects. Both the site-specific and adaptive management actions identified below rely on these deferred resource surveys before implementation. All actions will be screened internally using existing survey data and refined as required following site-specific surveys prior to implementation. Pre-implementation evaluation will be documented using the Cumberland District Project Proposal Form.

Red River Gorge and Red Wild and Scenic River Management Actions

Summary of Proposed Management Actions

Table 1 below provides a summary of proposed management actions in the project area, which are described in more detail in the sections below. Additional details and some proposed locations are provided in tables and maps in [Appendix B](#).

Table 1. Summary of Proposed Management Actions in the Project Area

Proposed Activity	Maximum Number
Designate Campsites	350 campsites
Designate Trails	50 miles of trails

² The Forest Service uses the most current and complete data available. GIS data and product accuracy may vary. They may be developed from sources of differing accuracy, accurate only at certain scales, based on modeling or interpretation, incomplete while being created or revised, etc. Using GIS products for other than those for which they were created may yield inaccurate or misleading results. The Forest Service reserves the right to correct, update, modify, or replace GIS products without notification. For more information contact: Daniel Boone National Forest, 1700 Bypass Road, Winchester, Kentucky 40391, or by phone at (859) 745-3100.

Coordinate System: NAD 1983 State Plane Kentucky FIPS 1600 Feet

Datum: North American 1983

³ This proposal does not preclude additional future proposed activities in the Gorge. Future activities not included in this proposed action would need to be analyzed in a future environmental analysis process.



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Proposed Activity	Maximum Number
Establish Parking (shift from existing user created to established)	530 spaces
Designate Shuttle Stops	28 stops
Designate Picnic Sites	60 sites
Construct Restrooms	36 restrooms
Construct Boat Launches	3 launches
Designate River Access Points	5 river access points
Stabilize and Harden Cliffside Locations	12 sites (6.14 acres)
Decommission and Restore Unauthorized Campsites	650 campsites
Decommission and Restore Unauthorized Trails	150 miles of trails
Rehabilitate and Restore Other Impacted Areas and Water Access Points	Adaptive management along the Red River corridor
Institute Forest Orders	See description below regarding camping; fires; riparian, rockshelter, and other off-trail protections; parking restrictions; and day use restrictions.

Designated Campsites

Using adaptive management and in accordance with [LAC recommendations](#), designate up to 150 front-country and 200 backcountry campsites⁴ from the approximately 1,000 inventoried unauthorized campsites in the Gorge.

Outside the Red Wild and Scenic River corridor and Clifty Wilderness, within the Red River Gorge Geological Area and Indian Creek area, designate 14 group sites for 15-30 campers each, with possible amenities including picnic tables, tent pads up to 24 by 48 feet, and a fire ring with benches. Up to 10 of the proposed backcountry campsites would be designated as group sites for up to 20 people and would be located outside the Clifty Wilderness, with no additional amenities. The remaining 136 front-country

⁴ Front-country campsites are defined as located in Recreational Opportunity Spectrum (ROS) classes Roaded Natural and Rural (development scale 3 and above) and backcountry are defined as located in ROS classes Semi-Primitive Non-Motorized to Primitive (development scale 1 and 2). See table 1, Appendix B for details.



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and 190 backcountry campsites would be single campsites with a footprint of up to 30 by 30 feet. See tables 2 and 3 below for proposed campsite numbers, locations, and possible amenities.

Tables 7 and 8 in [Appendix B](#) provide more details regarding proposed single and group campsite locations, amenities, and sizes. Proposed designated campsite amenities will depend on development scale (table 6, Appendix B), Recreation Opportunity Spectrum (ROS) class⁵ and LAC zone⁶, proximity to roads, and feasibility of construction and maintenance at specific site locations to meet visitor needs. Location of existing and proposed parking and restrooms will be considered for proximity to designated campsite locations, especially group sites. Table 2 below lists proposed campsites and trails by location: the Red River Gorge Geological Area, Clifty Wilderness, Indian Creek, and overlapping Red Wild and Scenic River segments. See depiction of these general locations in the Project Vicinity Map above.

In the Clifty Wilderness, we are proposing to designate up to 60 (of the proposed 200) backcountry campsites and manage these designated sites as part of the larger Red River Gorge campsite management and reservation system. This would limit the number of campers and campsites to preserve solitude and ecological integrity in wilderness, and to maintain its “untrammeled” wilderness character. When the untrammeled quality is preserved, wilderness ecological systems are essentially unhindered and free from the actions of modern human control or manipulation. We will use a “Minimum Requirements Analysis” (MRA) to determine the minimum requirements to plan and administer proposed designated camping in wilderness as required by the Wilderness Act. Designation of campsites in wilderness with associated site delineation signage would not occur without approval from the regional forester.

Table 2. Proposed Designated Campsites and Non-Motorized Trails

Location	Maximum Backcountry Campsites	Maximum Front-country Campsites	Maximum Miles of Trails	Recreation Opportunity Spectrum (ROS)	LAC Zone(s)
Red River Recreational Segment (within RRGGA)	10*	10*	10*	Semi-Primitive Non-Motorized, Roaded Natural, and Rural.	Semi-Primitive, Roaded Natural, and Concentrated Use Zones
Red River Gorge Geological Area (includes recreational segment above)	130	135	23	Semi-Primitive Non-Motorized, Roaded Natural, and Rural.	Primitive, Semi-Primitive, Roaded Natural, and

⁵ The Forest Service uses the Recreation Opportunity Spectrum (ROS) to classify and describe a range of recreation opportunities available, described on a continuum ranging from primitive to urban (ROS Book 1986, FSM 2310). A Recreation Opportunity Spectrum setting is defined as the combination of physical, biological, social, and managerial conditions that give value to a place. By combining variations in these conditions, it is possible to provide a diversity of recreational settings for visitors to enjoy.

⁶ One step of the LAC process resulted in a narrative description of resource, social, and managerial conditions defined as appropriate and acceptable for each opportunity zone. These zones were described on a continuum from Pristine to Concentrated Use.



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Location	Maximum Backcountry Campsites	Maximum Front-country Campsites	Maximum Miles of Trails	Recreation Opportunity Spectrum (ROS)	LAC Zone(s)
					Concentrated Use Zones
Red River Wild Segment (within Clifty Wilderness)	15*	0	4*	Primitive	Semi-Primitive Zone
Clifty Wilderness ⁷ (includes wild segment above)	60	0	13	Primitive	Semi-Primitive Zone
Indian Creek Area	10	15	14	Roaded Natural and Rural.	Roaded Natural zone

*Numbers are duplicate, already included in numbers for Red River Gorge Geological Area or Clifty Wilderness.

Table 3. Site Development and Possible Amenities

Number of Campsites	Maximum Proposed Amenities (single campsites)	Maximum Proposed Amenities (group sites)	Recreation Opportunity Spectrum (ROS) Class	Development Scale (see table 6, Appendix B)
150 front-country sites (includes 14 group sites)	13 by 16-foot gravel and timber tent pads, bear boxes, metal fire rings, picnic tables, and lantern poles	24 by 48-foot gravel and timber tent pads, picnic tables, fire rings, and benches	Rural and Roaded Natural	0 to 4
200 backcountry sites (includes 10 group sites)	Site delineation signage and natural materials to define areas of impact, and metal fire rings at select sites	Site delineation signage and natural materials to define areas of impact, and metal fire rings at select sites	Semi-Primitive Non-Motorized and Primitive ⁸	0 to 2

⁷ Designated campsites in wilderness are contingent on Wilderness Minimum Requirement Analysis.

⁸ Primitive ROS includes but is not limited to wilderness areas.



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Designated Trails

Using adaptive management and in accordance with [LAC recommendations](#), reroute, redesign, and/or designate as part of the forest non-motorized trail system up to 50 miles of unauthorized trails within the project area. This may include construction of one approximately 35-foot footbridge across Edwards Branch to access proposed designated campsites.

Transportation and Parking

Through partnerships with federal, state, and local agencies, construct up to 530 hardened parking spaces, moving existing unauthorized roadside parking to designated parking areas. Construct up to 28 25- by 13-foot paved minibus shuttle stops. See table 4 below and tables 8 and 9 in Appendix B for potential parking and shuttle stop locations. Designate and install signs at certain parking spaces for overnight permitted users only.

Address deferred maintenance on existing transportation and parking infrastructure including repairs and reconstruction to agency standards (including widening and pullouts) to facilitate safe two-way traffic access and accommodate current levels of use. This may include changing the surface conditions of parts or all of Chimney Top, Tunnel Ridge, Rock Bridge, and Indian Creek Roads, with consideration given to the appropriate use of compacted gravel, asphalt, or pavement.

Visitor Amenities

Through partnerships with federal, state, and local agencies, construct up to 60 picnic sites and 36 unisex restrooms without running water or sewer infrastructure within the Red River Gorge Geological Area including the recreational segment of the Red River corridor and Indian Creek area. Additionally, construct four 10- by-10-foot dumpster pads with bear proof dumpsters and four welcome portal kiosks with recreation information at proposed pullouts within the Red River Gorge Geological Area outside the Wild and Scenic River corridor. New amenities would be located using adaptive management design elements to improve the recreation experience and concentrate use to prevent resource degradation elsewhere. See table 4 below, as well as figure 8 and tables 8 and 9 in Appendix B, for potential picnic site and restroom locations. To reduce impacts to soils and vegetation, picnic site construction includes installing gravel pads up to 12- by 18-feet on each site with a table.

Table 4. Proposed Transportation, Parking, and Visitor Amenities by Area

Location	Maximum Additional Designated Parking Spaces	Maximum New Shuttle Stops	Maximum New Picnic Sites	Maximum New Unisex Restrooms	Development Scale	ROS Class
Red River Recreational Segment (within RRGGA)	130*	12*	40*	11*	0 to 4	Rural and Roaded Natural
Red River Gorge Geological Area (includes Recreational)	410	23	50	30	0 to 4	Rural, Roaded Natural, and Semi-Primitive



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Location	Maximum Additional Designated Parking Spaces	Maximum New Shuttle Stops	Maximum New Picnic Sites	Maximum New Unisex Restrooms	Development Scale	ROS Class
Segment above)						Non-Motorized
Red River Wild Segment and Clifty Wilderness	N/A	N/A	N/A	N/A	0 to 2	Primitive
Indian Creek Area	120	5	10	6	0 to 4	Rural and Roded Natural

*Numbers are duplicate, already included in numbers for Red River Gorge Geological Area.

Boat Launches

Construct up to three boat launches for non-motorized small watercraft within the recreational segment of the Red Wild and Scenic River corridor. This would improve river access, provide shorter trip lengths for the more novice skill levels of many river users, and reduce resource impacts associated with unauthorized boat launch sites (figure 2). Construction of each launch would include up to 0.5 miles of new permeable pavement road for access from a main road, a set of stone slab steps, and a launch area located on natural beach or gravel bar, like the Copperas Creek boat launch design displayed below in figure 3. Revegetate as needed to control erosion and define the area of impact.

Potential Boat Launch Locations

- Gladie/ Bison Fields
- Edwards Branch confluence

Figure 2. Erosion at Unauthorized Boat Launch on Red River Recreational Segment past Schoolhouse Branch



Figure 3. Example of Proposed Boat Launch Design from Copperas Boat Launch



River Access Points

Rehabilitate, design, and officially designate up to five of the approximately 40 inventoried existing unauthorized water recreation access points within the recreation segment of the Red River corridor to reduce resource impacts and improve sustainability. Designated access points would be located on natural beaches or gravel bars; however, site improvement techniques may include revegetation by planting cereal grasses and native forbs, grasses, tree species, or river cane; installing up to six⁹ sets of stone slab steps; and constructing up to 0.5 miles of access trails to Forest Service standards (included in proposed trail designations above). At Jump Rock, build a log jam structure in the banks, incorporating brush and slash as a filter to trap suspended sediment. Where possible, use live cuttings of native vegetation such as sycamore and river cane to colonize native plants and stabilize the area. Figure 4 shows the existing condition of Jump Rock, a river access location that needs improvements and remediation.

Potential River Access Locations

- Jump Rock
- Up to four locations along KY 715 between Copperas Creek and Tower Rock

⁹ Includes two sets of steps at Jump Rock, one on each side of the river.

Figure 4. Proposed river access location at Jump Rock, depicting current erosion and denuding of vegetation



Cliffside Access Stabilization and Hardening

Through partnerships with local recreation and volunteer groups, we propose to stabilize, rehabilitate, and increase resiliency of approximately 267,550 square feet (6.14 acres) across 12 heavily impacted cliffside access locations. Priority for stabilization work would be given to areas suffering from erosion, compaction, or loss of vegetation, and impacted areas in or within the dripline of a rockshelter. Site improvement techniques may include planting of native vegetation, constructing dense graded aggregate pads to reduce erosion, constructing platforms and/or boardwalks, and installing fencing to limit extent of impacts at the base of geologic features. Materials and techniques would depend on ROS class and site development scale, including consistency with Wilderness Act requirements. We would prohibit entry into areas with known archeological resources, and install signs notifying the public of closures as needed.

Restoration of User-Created Impacts

Decommission approximately 650 unauthorized campsites and 150 miles of unauthorized trails that do not meet criteria for enhancing and protecting water quality such as those located within the 100-year flood plain and those that adversely affect resources including soil productivity, cultural resources, threatened and endangered species, wilderness character, or the river's outstandingly remarkable values. Figure 5 below depicts erosion and sedimentation impacts from an unauthorized campsite along Indian Creek that is proposed for decommissioning. Campsite decommissioning activities include planting native



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vegetation in disturbed areas, then placing boulders and other natural barriers such as dead and down wood and debris to prevent camping. Trail decommissioning activities include preventing use through planting native vegetation and disguising impacted areas with natural debris.

We would also rehabilitate water recreation access points and impacted locations within the Red River corridor with existing resource concerns (figure 2) and where sustainable access cannot be provided. We may use additional restoration tools including bank stabilization techniques such as geotextiles and native tree and vegetation planting. Rip rap may be used as needed for health and safety or to protect resources, following a section 7 analysis under the Wild and Scenic Rivers Act with regional forester approval prior to implementation.

We would close restoration areas to public entry by placing boulders and other natural barriers including dead and down wood and debris and installing temporary signage (depending on ROS class). Planting native vegetation in disturbed areas and protection of young plants through closures would promote vegetation growth and recovery of natural conditions. In some instances, this restriction can be enforced under existing law and orders (36 CFR 251.53(a-g)). In some locations and situations, a new forest order would be required to enforce closures, as described below.

Figure 5. Streamside erosion and sedimentation from visitor impacts around an unauthorized campsite on Indian Creek are exacerbated by recent flooding. Photo credit Claudia Cotton.



Forest Orders

The following forest orders are proposed to support management actions in the project area and ensure adherence to forest plan standards:

Camping and Fires

Limit camping to designated campsites only within the Red River Gorge Geological Area, Clifty Wilderness¹⁰, and Indian Creek Area. Limit campfires to Forest Service fire rings and pedestal grills within the Red River Gorge Geological Area and Indian Creek Area. Prohibit open fires within the Clifty Wilderness.

¹⁰ Fires would be permitted at designated campsites in wilderness if campsites are designated following Minimum Requirements Analysis.



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Riparian, Rockshelter, and other Off-Trail Protections

To protect archaeological sites, native vegetation, riparian areas, limit the spread of non-native invasive species, and prevent soil loss and road destabilization:

1. Prohibit bicycles and equestrian use in the Red River Gorge Geological Area and Clifty Wilderness, as depicted in figure 7 in [Appendix B](#)¹¹.
2. Within the rest of the project area outside the RRGGA and Clifty Wilderness, prohibit bicycles and horses within all riparian corridors, except at designated stream crossings¹² on National Forest System trails.
3. Within the rest of the project area outside the RRGGA and Clifty Wilderness, prohibit bicycles and horses from approaching within 100 yards of clifflines and rockshelters, unless on designated system trails or other designated locations (such as hitching rails, bike racks, etc.).
4. Establish a 100 yard “no public entry” buffer around the perimeter of developed recreation sites, such as picnic sites and river access points, within riparian corridors.
5. Prohibit entry into restoration areas using boulders, natural barriers, and temporary fencing and signage.
6. Prohibit installation of new bolts and fixed anchors in the Clifty Wilderness.
7. Prohibit launching and take out of paddle craft or tubes at any location other than those designated, except under emergency circumstances.

Parking Restrictions

Restrict parking to designated areas only through signs, education, enforcement, and installation of barriers to prevent parking outside of hardened parking areas.

Day Use Restrictions

Prohibit use between the hours of 10PM and 6AM at:

1. Sky Bridge Recreation Area – Examine existing day use only forest order boundary and modify as necessary to accommodate designated campsites.
2. Gladie Visitor Center and Historic Grounds – Reestablish day use only forest order that expired in 2015.
3. Jump Rock/ Sheltowee Trailhead – Create day use only boundary from parking area to suspension bridge and on south side of Red River in the vicinity of Jump Rock.

Comprehensive River Management Plan, Boundaries, and Capacity

The proposed action includes adoption of a comprehensive river management plan for the Red Wild and Scenic River, based on the requirements of the Wild and Scenic Rivers Act (USDA Forest Service 2021a). Additional protections include recommending a permanent boundary for each segment of the river and establishing user capacity levels and associated thresholds for action. Recommended permanent boundaries are shown in figure 6 in [Appendix B](#), and user capacity thresholds are discussed in the draft user capacity analysis. The draft comprehensive river management plan includes the following information:

¹¹ Cross-country bicycle and equestrian travel will continue to be allowed in the Indian Creek, Spaas Creek, Hatton Ridge, and June Bug Ridge areas in accordance with other forest orders.

¹² Crossing is defined as entering and exiting riparian area perpendicular to the water body with no travel up or down stream.



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- a description of the existing resource conditions including a detailed description of the outstandingly remarkable values;
- desired conditions for protecting river values;
- a determination of recreational visitor capacities;
- descriptions of consistent and inconsistent uses within the river corridor;
- description of instream flow and water quality;
- identification of regulatory authorities of other governmental agencies that assist in protecting river values; and,
- a monitoring strategy to maintain desired conditions.

Forest Plan Administrative Changes

This project includes two proposed administrative changes to the 2004 Daniel Boone National Forest Land and Resource Management Plan (forest plan) under the 2012 Planning Rule (36 CFR 219.13(c)). The first is to correct the boundary for the Red Wild and Scenic River depicted in the forest plan (Appendix G, figure G-12) through the use of modern survey technology to create a precise digital boundary as intended by the state for the wild segment and as authorized for the entire river corridor by the United States Congress. The recreational segment boundary depicted in the forest plan includes 1,440 acres along the river corridor. The forest surveyor refined the boundary from hand drawn maps into digitized maps using modern survey technology. A small sliver of land was undefined between the Clifty Wilderness boundary and a section of the Red Wild and Scenic River recreational boundary shown in the forest plan. We propose to clarify discrepancies in acreage and create consistency across the forest plan, boundary package to be submitted to Congress, and comprehensive river management plan, by making one clean boundary line between the current recreational segment boundary and the Clifty Wilderness boundary. The final acreage of the recreational segment of the river corridor with the proposed changes and modern mapping would be 1,597 acres, a change of 157 acres from that listed in the forest plan. Likewise, for the wild segment, we propose to clarify discrepancies in acreage and more precisely reflect the legal description for the state boundary as required in the Act designating the Red River (P.L. 95-625). The final acreage of the wild segment of the river corridor with the proposed changes would be 1,010 acres, a reduction of 86 acres from the 1,096 acres listed in the forest plan.

The second proposed administrative change is to correct the Scenic Integrity Objective within the Red River Gorge Geological Area (Prescription Area 3.E) outside the Clifty Wilderness, including the recreational segment of the Red Wild and Scenic River (Prescription Area 3.C.3). The forest plan adopted the Forest Service scenery management system (SMS) and established scenic integrity objectives (SIO) for the plan area. The system is described in Agricultural Handbook 701, Landscape Aesthetics: A Handbook for Scenery Management (SMS Handbook) (USDA Forest Service 1995) and Forest Service Manual 2380. Scenic integrity objectives range from Very High to Very Low and establish limits of acceptable human alterations to the desired character of the scenery. Forest plan Appendix C lists SIO by prescription area. The plan currently lists the Red River Gorge Geological Area and the recreational segment of the Red Wild and Scenic River as having a Very High SIO. This appears to be a typographical error and is inconsistent with both existing and desired conditions described in the plan for these prescription areas, as well as with the corresponding forest plan Recreation Opportunity Spectrum (ROS) and development scale. This administrative change would correct the SIO to "High" in the Red River Gorge Geological Area (outside Clifty Wilderness) and along the recreational segment of the Red Wild and Scenic River. It would further create consistency with forest plan desired conditions, ROS, and development scale in these prescription areas. The Clifty Wilderness and the wild segment of the Red Wild and Scenic River are listed as Very High, and would remain as such, as this SIO is consistent with the existing and desired conditions, as well as ROS and development scale for these prescription areas.



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Design Elements

Design elements are incorporated into the proposed action to ensure law, regulation, policy, and land management plan compliance. Proposed activities would be implemented following all relevant design elements listed in [Appendix A](#).

Other Alternatives Considered but Not Analyzed in Detail

While a no action alternative is not explicitly described or analyzed in this document, the existing management conditions are described in the River Values Evaluation (USDA Forest Service 2021b) and summarized in the [Purpose and Need](#) section above. The [Environmental Impacts](#) section below compares, as needed, the effects of the proposed management actions and the comprehensive river management plan to the effects of continuing to manage the Red River Gorge without a comprehensive river management plan and under the current rules, regulations, and visitor management systems. The River Values Evaluation documents the status of resource conditions and river values both at the time that Congress designated the Red River as a wild and scenic river and in the present. This is used as baseline throughout this environmental assessment and meets the requirements of 36 CFR 220.7(b)(2)(ii).

A no action alternative would not achieve desired future conditions or objectives described in the forest plan for the project area. Current visitor use is degrading resource conditions throughout the Gorge and river values along the Red Wild and Scenic River corridor (Sharp 2014, USDA Forest Service 2014, USDA Forest Service 2018). Additionally, not taking action would violate the Wild and Scenic Rivers Act, which requires the Forest Service, the administering agency for the Red River, to protect and enhance the river values for which the river was designated, and to develop a comprehensive river management plan including capacity and final river boundaries. If no actions are taken to address the impacts of increased visitation, resource values will continue to be degraded. Adverse impacts will likely continue to increase, affecting water quality, visitor experiences, and all the resources and river values present along the Red Wild and Scenic River and throughout the Gorge.

Environmental Impacts

This environmental analysis is conducted according to the Council on Environmental Quality's regulations for implementing the procedural provisions of the National Environmental Policy Act, effective September 14, 2020 (40 CFR §§1500-1508, 85 FR 137, p. 43357, July 16, 2020). These regulations apply to any NEPA process that begins after September 14, 2020.

The following sections describe how the project complies with the relevant laws, regulations, policies, and the forest plan, which provide the basis for thresholds for significance. Consistency with relevant laws, regulations, policies, and forest plan standards ensures that the proposed action does not meet thresholds for significance and supporting analysis and rationale for consistency are provided to reach a finding of no significant impact (FONSI). The Additional Effects Analysis section includes further analysis prepared to address potential issues raised by the public and forest resource specialists. Resource-specific analyses provide additional context and rationale for conclusions described below and are available in the project record and upon request.

National Forest Management Act (NFMA) - Land Management Plan Consistency

Resource specialists have reviewed the proposal and incorporated specific [design elements](#) listed under the "Proposed Action" in [Appendix A](#) to ensure consistency with applicable land management plan (forest plan) direction. The following summarizes the analysis and conclusions supporting plan consistency.



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Soils

The proposed action and project design elements Soil-1 through Soil-6 were developed in accordance with forest plan goals and objectives for soil management. No standards and guidelines for soils are identified in the forest plan that pertain to this project and proposed activities.

Hydrology

Forest plan standards 1.E-ENG-1 and 1.E-ENG-3 provide direction for road construction and construction of any new stream crossings to protect aquatic species and soils. Project design element Water-10 provides guidance for managing stormwater and construction of road stream crossings to ensure these standards are met.

Forest plan standard 1.E-REC-3 requires use of state and Forest Service best management practices and regional or national direction for erosion control when constructing trails. Project design elements Water-4 and Water-5 ensure consistency with this standard and relevant best management practices.

Forest plan standard 1.E-REC-4 addresses impacts to wetlands and floodplains. Project design elements Water 1, 2, 3, 4, and 6 provide guidance for preventing impacts to wetlands and floodplains, including through prevention of increased runoff and erosion.

Forest plan standard 3.C.1-ENG-1 requires evaluation of water resources projects along the Red Wild and Scenic River under Section 7 of the Wild and Scenic Rivers Act. Project design elements Water 7 and 8 provide guidance for preventing impacts to channels so as not to impede free-flowing character of the river. A section 7 analysis of proposed boat launches and river access points has been completed to ensure consistency with the Wild and Scenic Rivers Act and protection of the free-flowing characteristics of the Red Wild and Scenic River.

Fisheries

Forest plan standard 1.E-ENG-2 is relevant where designated trail segments cannot be relocated outside the 100-year floodplain and/or where they cross streams. Project design element Fish-1 protects the free-flowing characteristics of stream crossings and prevents any trail construction that would restrict fish movement, and project design element Water-10 provides guidance for managing stormwater and road-stream crossings, ensuring compliance with this standard.

Forest plan standard 3.C.3-VEG-1 requires vegetation management when needed to protect or restore the natural ecosystem of the area and to provide for fish and wildlife habitat. Project design element Fish-2 requires vegetation management, including tree cutting or removal, to occur only for the purpose of restoring the natural ecosystem or to improve fish and wildlife habitat. Protecting riparian trees from being felled or damaged and proposed restoration activities including replanting denuded areas will ensure this standard is met.

Forest plan standard 1.E-REC-1 limits construction of trails for non-pedestrian uses in riparian corridors. Proposed trail designations, forest orders with equestrian and bicycle prohibitions, and project design element Fish-3 will ensure consistency with this standard.

There would be no adverse impacts to the American brook lamprey, the only fish conservation species in the project area, or its habitat, that would result in a loss of population viability, so this project would comply with the forest plan requirements for conservation species.



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Wildlife

Forest plan standards DB-WLF-8, DB-WLF-9, and DB-WLF-12 apply unit-wide to protect Indiana bats and are relevant to any action requiring tree removal. They also provide protections for other tree roosting bats, such as Northern long-eared bats. Project design element Wildlife-3, requiring clearance for cutting or removal of all trees or branches 3 inches or greater diameter at breast height (DBH) by the District Biologist prior to implementation, will ensure these standards are met.

Forest plan standard DB-WLF-13 protects cave-associated species unit-wide outside the Cliffline Community Prescription Area. Project design element Wildlife-4, requiring a minimum 200-foot buffer between all new recreation site construction and cave or mine openings (except for designated recreation caves), ensures consistency with this standard.

Forest plan standard 1.C-WLF-2 protects PETS species and habitat for Conservation species in the vicinity of cliffhills. Project design element Wildlife-5, requiring evaluation of siting of all new recreation sites by the District Biologist prior to implementation, ensures consistency with this standard.

Forest plan standard 1.C-WLF-3 protects peregrine falcon nesting sites from human disturbance between February 1 and June 30. Project design element Wildlife-6, requiring protection of these nesting sites during this timeframe ensures consistency with this standard.

Forest plan standard 1.E-WLF-1 prohibits in-stream substrate disturbance by mechanical equipment between February 1 and July 31 if aquatic PETS species occur in the vicinity. Project design element Wildlife-7, prohibiting in-stream substrate disturbance by mechanical equipment February 1 through July 31 if aquatic PETS species are determined to occur within one-quarter mile upstream and one mile downstream of the project site, ensures consistency with this standard.

Forest plan standard E-WLF-4 requires the forest to maintain existing openings in riparian corridors, and specific habitat conditions for cornsnakes. Project design element Wildlife-9 applies to all proposed ground-disturbing activities, requiring evaluation of siting of all new recreational facilities by the District Biologist prior to implementation to ensure consistency with this standard.

Forest plan standard G-REC-3 protects Rare Community sites from concentrated public use, and 1.G-VEG-CANE-1 protects canebrakes except where alteration is needed to manage PETS species or habitat for conservation species. These apply to all proposed management actions that have the potential to affect the river floodplain. Project design element Botany-5 ensures consistency with these standards.

Forest plan standard 1.J-REC-1 restricts entry to significant colony sites for PETS bat species. Project design elements Wildlife-1 (that requires evaluation of all new or rerouted trails to prevent significant effects to PETS species), Wildlife-4 (that prohibits new recreation site construction within a minimum of 200 feet of cave or mine openings, except for designated recreation caves), and Wildlife-8 (prohibiting siting of campsites within 200 feet of an opening to posted colony sites for PETS bat species), ensure consistency with this standard.

Forest plan standard 1.J-REC-2 prohibits camping and fire building within 200 feet of an opening to posted colony sites for PETS bat species. Project design element Wildlife-9, requiring siting of campsites within no less than 200 feet of a cave opening containing PETS bat species, ensures consistency with this standard.

Forest plan standard 1.J-VEG-2 and 1.J-VEG-3 provide timing limitation for certain tree-cutting activities near known significant Indiana bat hibernacula and of suitable bat roost trees. Project design element Wildlife-3, requiring clearance for cutting or removal of all trees or branches 3 inches or greater DBH by the District Biologist prior to implementation, will ensure these standards are met.



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There would be no adverse impacts to terrestrial conservation species or their habitats that would result in a loss of population viability, so this project would comply with the forest plan requirements for conservation species.

Botany

The proposed action was developed in accordance with the forest plan goals and objectives for sensitive plant species. No standards and guidelines for sensitive plant species are identified in the forest plan.

163 plant conservation species were analyzed in the project area. The proposed action would not result in population effects or a loss of viability in the planning area for any of the forest plant conservation species, so this project would comply with the forest plan requirements for conservation species.

Scenery

The proposed action and project design elements were developed in accordance with forest plan goals and objectives for scenery management, including Scenic Integrity Objectives, as described in more detail in the scenery analysis. No standards and guidelines for scenery management are identified in the forest plan.

Heritage

Forest plan standard C-REC-1 protects heritage resources in the cliffline zone. By implementing design elements Arch-1 through Arch-3, the project would avoid adverse effects to historic and archaeological resources in the cliffline zone and ensure consistency with this standard.

Forest plan standard 3.C.3-REC-1 requires the USDA Forest Service to take action to protect qualifying heritage sites from adverse impacts. Following the Programmatic Agreement and completing Section 106 consultation, along with implementing project design elements Arch-1 through Arch-5, ensures project consistency with this forest plan standard.

Recreation

Forest plan standard 3.A-REC-1 requires that new construction of recreation infrastructure and trails, or improvements to existing, must align with the areas' assigned Recreation Opportunity Spectrum (ROS) class and associated development scale. Locations of proposed activities and project design element Rec-3, which requires all recreation site improvements to meet or exceed ROS classes, ensures consistency with this standard.

Forest plan standard 3.E-REC-1 prohibits camping within 100 feet of the base of the cliff or back of a rockshelter unless designated by the Forest Service. Project design element Rec-6, which requires all designated campsites be located 100 feet from the base of any cliff or back of any rockshelter, ensures this standard is met.

Forest plan standard 3.E-REC-3 limits off-trail horse and livestock in the Red River Gorge Geological Area. The proposed forest order, which prohibits equestrian use in the Red River Gorge Geological Area, ensures consistency with this standard.

Wilderness and Inventoried Roadless Areas

The proposed action is consistent with forest plan standard 2.A-Rec-2 since the option of designated campsites is proposed to control the adverse physical and social impacts of the current use within the wilderness and Gorge. Impacts to the natural resources from use within the Clifty Wilderness are well documented through the Limits of Acceptable Change (LAC) process as well as more recently by project



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resource specialists. Social impacts have been documented through the LAC process, Wilderness Stewardship Performance (WSP) monitoring, and the Wilderness Character Monitoring (WCM).

Additionally, the proposed action is consistent with forest plan goal 3.E-Goal 7 and objective 3.E-Objective 7.A for the Wolfpen Inventoried Roadless Area, since no road construction or timber harvest would occur, maintaining the roadless characteristics of this area.

Other Law, Regulation and Policy Consistency

The following laws, regulations, or policies pertinent to this project include:

Architectural Barriers Act (ABA)

The Architectural Barriers Act (ABA) of 1968, as amended, stipulates that all buildings which are (1) financed with Federal funds, and (2) intended for use by the public, or which may result in employment or residence therein of physically handicapped persons, be designed and constructed in accordance with standards prescribed by the Architectural Barriers Act to ensure that such buildings are fully accessible to and usable by handicapped individuals. Project design element Recreation-2, which states that where practicable, recreation improvements must follow Forest Service accessibility guidelines, will ensure this project is consistent with the Architectural Barriers Act.

Forest Service Handbook 2309

Forest Service Handbook 2309.13 and 2309.18 outline objectives and policy for management of Developed Recreation Sites and Trails. This direction is met for this project through project design and the development of design elements Rec-1, Rec-4, Rec-5, and Rec-7 through Rec-17. Handbook direction for recreation sites and trails pertaining to hydrology is met through the development of design elements Water-1 through Water-15.

Forest Service Manual 2551

Forest Service Manual 2551 provides policy for soil quality management on National Forest System lands. By including the forest soil scientist on the interdisciplinary team and including soil assessment, analysis, and monitoring as part of project planning and implementation, the actions described in this project comply with the manual's direction.

Clean Air Act

Proposed activities would not impact air quality, as the project does not authorize or promote new uses or additional travel, but instead is designed to reduce resource impacts from existing use types and levels. Therefore, the project is consistent with the Clean Air Act.

Clean Water Act

The results of Forest Service management must not exceed water quality standards. This project will comply with the Clean Water Act and protect water quality through the application of project design elements Water 1 through Water 15.

Impaired waterways are recorded in a report created by Kentucky Division of Water (KDOW) every two years, the Integrated Report to Congress on the Condition of Water Resources in Kentucky (2010 Integrated Report). Swift Camp Creek is a major tributary to the Red River. The headwaters of Swift Camp Creek are impaired from *Escherichia coli* (*E. coli*) and sediment, and Swift Camp Creek mainstem is impaired from *E. coli*. Improving the water quality of Swift Camp Creek will, therefore, also improve the water quality of the Red River. The other waterways that are included in this watershed planning project, Gladie Creek, Indian Creek, and Clifty Creek, are not impaired.



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With appropriate best management practices and project design elements, along with proposed site rehabilitation, the proposed management actions would not exceed water quality standards for sediment or total suspended solids, and therefore would not exceed relevant thresholds for significance. Identifying an appropriate capacity for visitor use (USDA 2021c), clean water grants for reducing pollutant discharge (especially *E. coli*), and rehabilitation of disturbed areas throughout the watershed as proposed in the project would help to reduce visitor impacts on water quality. Project design elements and best management practices would be applied at specific project areas and reviewed for implementation and effectiveness by a hydrologist, ensuring consistency with water quality standards during project implementation.

Endangered Species Act - Threatened, Endangered, Proposed and Candidate Species and Critical Habitat

The purpose of the Endangered Species Act is to provide a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved and to provide for the conservation of such endangered species and threatened species. The Endangered Species Act directs federal agencies to ensure that actions authorized, funded, or carried out by these agencies are not likely to jeopardize the continued existence of threatened or endangered species, or result in the destruction or adverse modification of their critical habitats (Endangered Species Act Section 7(a)(2)).

This project complies with the Endangered Species Act. In late 2020 and early 2021, we began consultation with US Fish and Wildlife Service (FWS) regarding the planning process and proposed management actions. A biological assessment has been prepared for species and critical habitats, and we will obtain concurrence from the FWS before signing a decision.

Species with a Determination of No Effect under the Endangered Species Act:

Botanical Species:

There would be no effect to Short's Bladderpod because the location listed on the Daniel Boone National Forest is historic (Long et al 2017) and the species has not been found on the forest since 1923. The project area is outside of this species' range in Kentucky.

There would be no effect to Running Buffalo Clover because the species is not known from Powell or Wolfe counties. It is known from Menifee County, but close to Cave Run Lake, well outside the project areas. Habitat within the project area is marginal, and the species has not been detected during botanical surveys in the project area. The project area is probably outside of this species' range in Kentucky.

Fish Species

There would be no effect to the Kentucky arrow darter, a listed threatened species, or its designated Critical Habitat in the project area, and no effect to the Snuffbox mussel, a listed endangered species in the project area, because proposed activities would reduce fine sediment delivery to streams, and project design elements and best management practices would avoid negative effects on listed fish or their habitats.

Species with a Determination of May Affect, Not Likely to Adversely Affect under the Endangered Species Act:

Terrestrial Wildlife Species

The project may affect but is not likely to adversely affect gray bat or Virginia big-eared bat. Suitable habitat is present in the project area for both species. Forest Plan Standards prohibit activities and mechanical equipment in cave and cliffline zones, as well as restrict tree removal within certain distances of significant caves, unless those actions specifically benefit PETS or Conservation species



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(USDA Forest Service, 2004b). Project design elements Wildlife-4 and Wildlife-5 will ensure consistency with those standards. Project-related effects to gray bats and Virginia big-eared bats would be limited to short-term disturbance during project implementation.

The project may affect but is not likely to adversely affect Indiana bat because project design element Wildlife-3 will ensure consistency with the Forest Plan (USDA Forest Service 2004a) standards applicable to timing of tree cutting activities to protect Indiana bat habitat. Effects would be minor and related to short-term disturbance during project implementation and removal of minor amounts of suitable habitat.

Species with a Determination of May Affect, Likely to Adversely Affect under the Endangered Species Act:

Terrestrial Wildlife Species

The project may affect and is likely to adversely affect northern long-eared bat. Project design element Wildlife-3, requiring clearance of cutting or removal of all tree or branches 3 inches or greater DBH by the District Biologist prior to implementation, will ensure protection of known maternity roosts and hibernacula and that limited tree removal activities necessary for this project will occur outside of the April 1 to October 31 northern long-eared bat active season, which includes the June 1 to July 31 pup season. Most effects would be minor and related to short-term disturbance during project implementation and removal of minor amounts of suitable habitat. Non-prohibited take of individuals could occur during limited tree removal, but the project is consistent with the 4(d) Rule.

Bald and Golden Eagle Protection Act

This law, as amended in 1962, prohibits take, possession, sale, purchase, barter, offer to sell, purchase or barter, transport, export or import, of any bald or golden eagle, alive or dead, including any part, nest, or egg, unless allowed by permit (16 U.S.C. 668(a); 50 CFR 22). "Take" includes pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb (16 U.S.C. 668c; 50 CFR 22.3.) The project complies with the Bald and Golden Eagle Protection Act of 1940, as amended. Design element Wildlife-11, which would seasonally close recreation sites if bald nesting activity is observed and prevent placement of new recreation sites in areas that would create conflicts with bald eagle nesting, will prevent impacts to nests. Therefore, impacts will not rise to the level of take of bald eagle.

Sensitive Species (FSM 2670)

Forest Service Manual 2670 outlines objectives and policy for threatened, endangered, and sensitive species. This Forest Service Manual direction is met through the preparation of a biological assessment and wildlife, fisheries, and botanical biological evaluations, protecting known occurrences of sensitive wildlife and fish species and known sites of sensitive plant species through proposed activities and project design elements, and analyzing impacts to sensitive plant habitat to ensure that viability will be maintained.

Species with a Determination of No Impact (under FSM 2670):

Sensitive Aquatic Species:

Northern brook lamprey, elktoe mussels, and salamander mussels have been documented within the project area. The project would have no impact on sensitive aquatic species because project design elements and best management practices are expected to result in a decrease in sediment delivery when compared to current conditions. The long-term effects are expected to be beneficial as approximately 35 acres of currently denuded and point source of sediment contribution would be rehabilitated with native, riparian dependent vegetation, therefore reducing fine sediment delivery to area streams.



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Sensitive Plant Species:

The project would have no impact on the following sensitive plant species: Lucy Braun's white snakeroot, American barberry, Cumberland sandreed, juniper sedge, stoneroot, Kentucky lady's-slipper, French's shooting star, Rockcastle aster, mountain heartleaf, nodding rattlesnake-root, bay starvine, hairy skullcap, rock skullcap, Appalachian rosinweed roundleaf fameflower, cutleaved meadow-parsnip, soft-haired thermopsis, sand grape Closter's brook-hypnum, nardia liverwort, Rau's spur moss, Sullivant's leafy liverwort, and Agoyan cataract moss, because they are out of the range in the state of Kentucky, no known occurrences are found in the project area, or their habitat is not likely to intersect with proposed activities.

Sensitive Terrestrial Wildlife Species:

The project would have no impact on Pine Mountain tigersnail, Clifty covert, wrinkled button, cupped vertigo, frosted elfin, or silphium borer moth because the project area is either outside of the known range of the species or no suitable habitat is present.

Species with a Determination of May Impact Individuals or Habitat, Not Likely to Trend Toward Listing or Loss of Viability (under FSM 2670):

Sensitive Plant Species:

The project may impact individuals or habitat, but is not likely to cause a trend towards federal listing or loss of viability to the population or species for small spreading pogonia, butternut, sweet pinesap, Canby's mountain-lover, Blue Ridge catchfly and white-haired goldenrod, due to impacts to known occurrences or suitable habitat by proposed activities.

Sensitive Terrestrial Wildlife Species:

The project may impact individuals, but is not likely to cause a trend towards federal listing or loss of viability to the population or species because project design elements will prevent or minimize the potential for adverse impacts to individuals of the following species: green salamander, eastern hellbender, Rafinesque's big-eared bat, southeastern myotis, eastern small-footed myotis, tricolored bat, Appalachian bellytooth, delicate vertigo, northern metalmark, monarch, early hairstreak, cliffline caddisfly.

Invasive Species (Forest Service Manual 2900)

Forest Service Manual 2900 contains national direction for invasive species management. A brief non-native invasive plant species risk assessment was included in the botanical biological evaluation. The analysis concluded that with the use of project design elements and treatment of non-native invasive species through implementation, the risk of spreading non-native invasive species is moderate. The use of project design elements to reduce the impact of spreading non-native invasive species is consistent with the direction of Forest Service Manual 2900.

Special Management Areas

Wild and Scenic Rivers Act

The Wild and Scenic Rivers Act preserves selected rivers and their immediate environments in free-flowing conditions to protect them for the benefit and enjoyment of present and future generations. The Wild and Scenic Rivers Act requires that each river possess one or more outstandingly remarkable values, and that the administering agency prepare a comprehensive river management plan "to provide for the protection of the river values" (section 3(d)(1)). This includes resource protection related to the



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river's free-flowing condition, water quality, and outstandingly remarkable values. The Act also requires the administering agency to establish a detailed river corridor boundary of an average of not more than 320 acres per river mile.

This project meets the requirements of the Wild and Scenic Rivers Act by preparing a comprehensive river management plan including a capacity analysis and a detailed river corridor boundary, meeting all the requirements listed in the Act and described in more detail in Forest Service Manual 2354.32. Additionally, the management actions proposed within the river corridor are designed to protect and enhance river values. Project design elements, including Recreation-4, Water-1, Water-8, and Scenery-5 provide for additional protection of river values when implementing proposed management activities, in compliance with this Act. A section 7 analysis has been completed, with determinations summarized below, to ensure protection of the free-flowing condition and protection and enhancement of outstandingly remarkable values where actions are proposed in the bed and banks of the river, including proposed boat launches and river access points.

Section 7 Analysis

A section 7 analysis has been prepared for proposed boat launches and river access points and will be submitted for approval as required under section 7 of the Wild and Scenic Rivers Act, 36 CFR 297, and Forest Service Manual 2354.73. The proposed boat launches and river access points as described will not have direct and adverse effects to the Red River's free flowing conditions, water quality, or outstandingly remarkable values.

Wilderness Act of 1964

Wilderness areas are defined under the Wilderness Act as an area of undeveloped federal land retaining its primeval character and influence, without permanent improvements or human habitation, which is protected and managed to preserve its natural conditions. Additionally, wilderness (1) generally appears to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable, and (2) has outstanding opportunities for solitude or a primitive and unconfined type of recreation. The act states that wilderness areas shall be administered to provide for the protection of these areas, the preservation of their wilderness character, and for the gathering and dissemination of information regarding their use and enjoyment as wilderness. The Clifty Wilderness is located with the project area, and proposed management actions in the wilderness include designation of certain unauthorized campsites and trails using adaptive management and decommissioning of others. The proposed action is consistent with the Wilderness Act.

While the proposed action may appear to contrast with the Act's definition of wilderness without permanent improvements, the proposed designation of campsites and trails are designed for the preservation of wilderness character. The Minimum Requirements Analysis (MRA) is summarized below and concludes that the proposed action will have both positive and negative impacts to the wilderness character. The MRA asks if the proposed action is necessary to preserve each quality of wilderness and what impact the action will have on those qualities.

Five qualities of wilderness character must be considered when actions are proposed within wilderness: untrammeled, undeveloped, natural, opportunities for solitude or primitive and unconfined recreation, and other features of value. The untrammeled quality allows natural processes to control the landscape free from manipulation or control by humans. This quality is often preserved when no action is taken. While designating campsites would have a negative impact to the untrammeled quality of wilderness character, current uses such as unauthorized campsites are trammeling the wilderness. Campsite designation would limit the area of impact and manipulation to those designated sites, protecting the rest of the wilderness from these trammeling impacts. The undeveloped quality preserves the primeval and natural state of the wilderness. Any permanent improvement and human occupation of these improvements would have a



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negative impact to the undeveloped quality of the wilderness character. However, current unauthorized campsites have already impacted the undeveloped nature of the Clifty Wilderness, and while designated campsites would also impact the undeveloped quality, they would limit the extent of impacts caused by continued proliferation of unauthorized campsites.

The natural quality refers to ecological systems and should be managed to be substantially free from the effects of modern civilization. Both unauthorized campsites and designated campsites could have negative effects to the natural quality of the wilderness. However, given the proliferation and expansion of unauthorized campsites within Clifty Wilderness, designating campsites and managing these sites would benefit the natural quality of the Clifty Wilderness. Opportunities for solitude or primitive and unconfined recreation is a more subjective quality of wilderness character, characterized by isolation from sights, sounds, and presence of others and human developments. Designating campsites may create a sense of confinement or human development and thereby have a negative impact to primitive and unconfined recreation, but the existing unmanaged campsites negatively impact opportunities for solitude. Currently, campsites are often clustered together, visible from the trail, with sights and sounds of other campers nearby. In some locations, unauthorized campsites are located on or immediately adjacent to the trail. This situation detracts from solitude for both campers and hikers within Clifty Wilderness. Designation of campsites would have a positive impact for solitude.

The other features of value quality may be ecological, geological, or other features of scientific, educational, scenic, or historic use. The Red River Gorge and the Clifty Wilderness are well known for their other features of value, and current uses are negatively impacting the biology, scenery, water quality, and cultural resources within the Clifty Wilderness. Designating campsites would have a positive impact to these other features of value and would minimize resource impacts in wilderness that detract from the wilderness experience while preserving and protecting these resources. Overall, positive long-term effects from the proposed action outweigh some negative impacts to wilderness character and would preserve the wilderness character more than taking no action.

2001 Roadless Area Conservation Rule (36 CFR 294)

Inventoried roadless areas refer to those areas identified and mapped in accordance with the Roadless Area Conservation Final Rule, known as the “2001 Roadless Rule” (36 CFR 294 and 66 FR 3244-3272). The 2001 Roadless Rule defines inventoried roadless areas as “areas identified in a set of inventoried roadless area maps, contained in Forest Service Roadless Area Conservation, Final Environmental Impact Statement, Volume 2, dated November 2000, which are held at the national headquarters office of the Forest Service, or any subsequent update or revision of those maps.” The Wolfpen Inventoried Roadless Area is in the project area between Clifty Wilderness and State Route 77. Proposed management actions in this roadless area include designation of certain unauthorized campsites and trails using adaptive management and decommissioning and restoration of unauthorized campsites and trails that do not meet criteria for designation.

The proposed action is consistent with the 2001 Roadless Area Conservation Rule. The intent of the rule is to maintain the roadless characteristics of the inventoried roadless areas. The proposed action will not allow for any new roads or timber harvest in the Wolfpen Inventoried Roadless Area. Any hazard tree removal for health and human safety near designated trails or campsites is allowed through administrative uses within an inventoried roadless area.

National Historic Preservation Act – Section 106 Review

Section 106 of the National Historic Preservation Act and implementing regulations at 36 CFR 800 (and associated Forest Service policy in Forest Service Manual 2360) require agency officials to conduct an assessment that identifies historic properties that could be affected by the activities described in the proposed action. Then, the responsible official must determine if the proposed action would have any



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adverse effects on those properties and follow steps to avoid or resolve adverse effects. Due to the large scale, complexity, and expected time span of the activities involved in the proposed action, the responsible official has proposed to defer the Section 106 cultural resource assessment. The project parameters meet the stipulations for deferral provided in 36 CFR 800.4(b)2 and 800.14(b)1.

In late 2020 and early 2021, we began consultation with Kentucky State Historic Preservation Office (SHPO) regarding the planning process and proposed management actions, including meeting on January 26, 2021, to discuss the proposed project, issues, surveys, and the consultation process. By following the 2015 Programmatic Agreement and the 2021 amendment to that agreement establishing a standard process for deferring surveys until after the NEPA decision, by completing section 106 consultation, and through implementation of project design elements Arch-1 through Arch-5, the project will be consistent with requirements described in Section 106 of NHPA and 36 CFR 800.

Government to Government Consultation (EO 13175)

We sent letters to the six federally recognized Tribal Governments on November 2, 2020, to ask for participation in early consultation on development of the proposed action and provide information about a virtual public meeting scheduled for November 10, 2020. The responsible official invited the six Tribes to a consultation meeting on March 24, 2021. Representatives attended from the Tribal Historic Preservation Office of the Shawnee Tribe and from the Eastern Band of Cherokee to discuss the proposed action and protection of archaeological resources. We will continue to consult with the Tribes through the NEPA process for this project.

Relevant Executive Orders

The responsible official determined the proposal complies with the following Executive Orders (EO), which were deemed relevant based on the nature of the proposal.

EO 11988, Floodplain Management – requires determination of action occurring in a floodplain, using HUD floodplain map or more detailed map if available.

Proposed project activities will avoid floodplains where possible and locate others strategically, implementing best management practices to minimize impacts to facilities in floodplains. Project design elements Water-2 and Water-3 protect floodplains and wetlands by locating all designated campsites and restrooms, along with trails where feasible, above the 100-year floodplain based on a hydrographic study floodplain analysis to be completed before project implementation. This does not include river access infrastructure such as boat launches or access roads, which would be designed and located strategically within the floodplain. Location of proposed activities and application of relevant design elements ensure minimal impacts on floodplains and consistency with this Executive Order.

EO 11990, Protection of Wetlands – avoid actions within wetlands unless there are no practical alternatives, and the action includes all practicable means to minimize harm to wetlands.

No project activities are proposed in wetlands, and project design elements Water-2 and Water-3 provide additional protection to prevent impacts to wetlands in compliance with this Executive Order.

EO 12898, Environmental Justice – identify and address disproportionately high and adverse effects on minority and low-income populations.

Project activities are anticipated to have beneficial effects to the local economy including potential to provide economic opportunities for minority and low-income populations. New fees are not proposed as part of this decision. The current fee structure will remain in place and may be modified over time in accordance with the Recreation Enhancement Act. The proposed project will not reduce access to the national forest for any person or population, and it will enhance accessibility through improved infrastructure and recreation opportunities.



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EO 13007, Indian Sacred Sites – avoid adversely affecting the physical integrity of these sites.

Government to Government consultation throughout the project, along with Section 106 consultation consistent with the 2015 Programmatic Agreement, as well as project design elements Arch-1 through Arch-5, will avoid adverse effects to Indian Sacred Sites.

EO 13112, Invasive Species -prevent the introduction of invasive species and provide for their control and to minimize the economic, ecological, and human health impacts that invasive species cause.

The botanical Biological Evaluation provides a brief analysis to ensure that the project design elements would minimize the spread of noxious weeds and invasive plant species. The inclusion of design elements to minimize the spread of noxious weeds and invasive plant species is consistent with the direction of Executive Order 13112.

EO 13186, Migratory Birds – identify actions that may have a measurable negative effect on migratory bird populations.

The project complies with the Migratory Bird Treaty Act of 1918, Executive Order 13186 of January 10, 2001, and the April 11, 2018, Department of the Interior memorandum, and the final rule on regulations governing take of migratory birds (U.S. Fish and Wildlife Service 2021). While the project may result in short-term disturbance to breeding or foraging individuals, the loss of nests of migratory bird species from project-related activities is expected to be very low to the point of not impacting populations; the purpose of the action is not to take migratory birds, their eggs, or their nests.

EO 14008, Tackling the Climate Crisis at Home and Abroad – requires a coordinated approach from planning to implementation in addressing climate change.

Proposed project activities would help to build climate resilience in the Gorge, under Executive Order 14008, issued on January 27, 2021, by reducing bare soil and erosion, restoring areas with native vegetation, and providing sustainable infrastructure to support existing recreational uses and visitor numbers while reducing impacts to resources.

Additional Effects Analysis

Soil

Soil erosion, driven by bare soil, would be minimal and short-lived in duration while sites are being closed, improved, and/or revegetated and covered. The long-term effect on soils would be beneficial since we would be reducing the overall amount of bare soil in the project area, and therefore reducing the amount of erosion. Estimates from table 4 in the soils analysis indicate that the proposed action would result in 37.09 acres of permanent bare soil and 56.25 acres of rehabilitated soil that is currently bare and eroding. These estimates are well within the threshold defined by forest plan Goal 4 Objective 4.0A: Maintain productive potential of the soil on at least 85% of each project area following all land management activities. Fifteen percent of the project area totals 6,410.85 acres. This project is estimated to produce 37.09 acres of permanent bare soil, which is 0.006% of the defined threshold.

Hydrology

Stream sedimentation from recreation use is a threat to water quality in this portion of the larger Red River watershed. Sedimentation is on-going from erosion of bare soils at unauthorized disturbed sites. Rainfall runoff and river flooding of impacted sites dislodge soils, and sediment-laden water runs off disturbed sites. Effects from this erosion can last for decades. Studies and reports document on-going sedimentation into the Red River and tributaries from recreational uses (USDA Forest Service 2013; RRWPR 2015).



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The project proposes construction of new recreation facilities, decommissioning of unauthorized campsites that do not meet criteria for enhancing and protecting water quality, and a network of designated trails and campsites that would reduce sedimentation. Under the proposed action, new or existing campsites and trails that are located on stable soil away from water could be designated, or new campsites and trails would be constructed in more stable areas. Areas of new recreation facility construction could cause short-term sources of erosion and sedimentation through soil disturbance and erosion and delivery of sediment to downstream water bodies. Poorly located trails and campsites would be considered for restoration.

Unauthorized campsites and trails have been documented as a major source of sedimentation. By providing ground cover and absorbing and breaking up surface flows, restoration of disturbed sites would be effective at reducing sedimentation of disturbed areas, especially where larger campsites are in the riparian zone within 100 feet of rivers and streams. WEPP model results from the Red River Gorge Watershed Protection Plan show that if the inventoried unauthorized trails, campsites, and vistas are closed and rehabilitated, upland erosion would be reduced by approximately 900 tons per year. This would also prevent approximately 769 tons of upland erosion from continuing down slope and probably being delivered to the Red River, in the form of stream sedimentation.

Bacteriological contamination of the Red River and tributaries including Swift Camp Creek is occurring within the project area streams. *E. coli* serves as an indicator of the possible presence of harmful strains of fecal bacteria. State standards for *E. coli* indicate a “safe” level of *E. coli* below which waters are safe for swimming and other water contact recreation. The Kentucky State standard for *E. coli* is a water quality threshold above which actions should be considered to reduce bacteriological loads to the Red River and tributaries. Wolfe County officials estimate that there are approximately 35 failing septic systems or direct discharges in the Swift Camp Creek area (personal communication with Wolfe County Health Department in RRWPR, 2015). This is likely a major factor for why Swift Camp Creek is impaired for *E. coli*. Efforts to control *E. coli* and other sources of water quality impairment from Swift Camp Creek are ongoing (RRWPR 2015). Sampling for levels of *E. coli* would need to be managed to stay below state standards to comply with the Clean Water Act and to protect public health and safety. The proposed action should have a negligible effect on *E. coli* values because the project will not be a source of *E. coli*.

Other Resources Not Analyzed in Detail

Effects to other resources were not analyzed in detail, because effects from proposed activities are not anticipated to approach any thresholds for significance as defined under relevant laws, regulations, policies, and the forest plan (see above). Proposed activities were designed to have beneficial effects and to meet forest plan goals and desired conditions for these resources. A summary of effects additional to those discussed in the NFMA and Other Law, Regulation, and Policy Consistency sections above is included for recreation and scenery below.

Recreation

Many recreation opportunities including hiking and equestrian trails, campsites, river access, and parking areas associated with the proposed activities currently exist on the ground; however, existing opportunities are largely user created and of poor quality, causing negative impacts to resources such as soil, water, vegetation, and scenery. Proposed activities may negatively impact some user groups who prefer primitive recreation opportunities such as dispersed camping and equestrian and bicycle travel. However, these types of opportunities continue to be available elsewhere on the forest. Most recreationists would benefit from the proposed designated recreation opportunities and infrastructure and the resulting improved resource conditions. The proposed action would enhance recreation opportunities and experiences within the project area through the construction of sustainable and resilient infrastructure and improved access. Adaptive management design elements associated with the proposed action



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ensure the development scale is compatible with the project area's Recreation Opportunity Spectrum class.

Scenery

The added direction for protecting and enhancing the scenery outstandingly remarkable value in the comprehensive river management plan, permanent river boundaries, and the proposed capacity would have a beneficial effect on the overall scenic integrity in the river corridor, maintaining or enhancing the generally high scenic quality of areas in and views from the river corridor.

Effects of the proposed management activities would primarily occur along the recreational segment and within the Gorge outside wilderness. The close proximity of certain actions to the river, such as boat launches and river access points, would render the actions evident to visitors. Implementation and construction activities would cause a short-term localized decrease in the scenic integrity. The scenic integrity would be expected to be enhanced in the long-term because the built environment would complement the ecological setting. Once the infrastructure to sustainably manage visitor use is established, the scenic integrity of the whole river corridor and larger Gorge would be enhanced. Areas adversely affected by unauthorized visitor use would begin to restore through proposed restoration activities and natural processes.



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Agencies, Organizations and Persons Consulted

Public involvement for this planning process began in November 2020, with a virtual public meeting on November 11, 2020. This coincided with a pre-NEPA opportunity to comment on the river values evaluation, proposed boundary, and proposed site-specific and adaptive management actions in the river corridor in addition to management actions in the larger Gorge to inform the development of the comprehensive river management plan and associated management actions. Additionally, we began hosting virtual meetings with local government officials and stakeholders to assist in development of the site-specific and adaptive management actions. We will continue to engage the public, Tribes, and interested stakeholders with project mailings, opportunities for meetings, and other outreach throughout the NEPA process, as well as during plan and project activity implementation.

The responsible official contacted or consulted with those listed below during the preparation of the environmental assessment in compliance with requirements to involve the public, relevant agencies, organizations, and governments.

Agencies

Kentucky Department of Fish and Wildlife Resources	Kentucky State Historic Preservation Office
Kentucky Energy and Environment Cabinet	Kentucky Tourism
	US Fish and Wildlife Service

Organizations/Businesses

Access Fund	Leave No Trace Adventures	Red River Gorge United
Baylor University	Lee County Tourism	Sheltowee Trace Association
Eastern Kentucky University	My Tiny Weddings	Sierra Club
Explorer Chick Adventure	Powell County Tourism Commission	Southeast Mountain Guides
Fox Mountain Guides	Powell County Search and Rescue	The Explore Kentucky Initiative
Friends of Red River	Red River Adventure	The Nature Conservancy
Friends of Red River Gorge	Red River Gorge Climber's Coalition	University of Kentucky Department of Forestry
Kentucky Heartwood	Red River Gorge Mountain Bike Alliance	Wolfe County Tourism
Kentucky Transportation Cabinet		Wolfe County Search and Rescue
Kentucky Waterways Alliance		

Native American Tribal Governments

Absentee Shawnee Tribe	United Keetoowah Band of Cherokee Indians
Cherokee Nation	
Eastern Band of Cherokee Indians	
Eastern Shawnee Tribe of Oklahoma	
Shawnee Tribe	



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Elected Officials

James Anderson, Powell County Judge Executive

Rick Stltner, Menifee County Judge Executive

Raymond Banks, Wolfe County Judge Executive

Chuck Caudill, Lee County Judge Executive

Donnie Watson, Estill County Judge Executive

Individuals

The project contact list is in the project record.



Finding of No Significant Impact (FONSI)

The Finding of No Significant Impact documents the reasons why an action, not otherwise excluded from documentation in an environmental assessment (EA) or environmental impact statement (EIS) in accordance with 40 CFR §1501.3, will not have a significant effect on the human environment and for which an environmental impact statement therefore will not be prepared. The Finding of No Significant Impact discussion considers all information included in the environmental assessment, as well as documentation in the project record. Resource specialists have reviewed the proposal and, based on their input, the responsible official made the following determinations with regards to the potentially affected environment and degree of effects considered for a Finding of No Significant Impact.

Potentially Affected Environment

The 42,739-acre project area includes approximately 30,484 acres of the Red River Gorge Geological Area. Approximately 12,380 acres of the Clifty Wilderness and 10,254 acres in the Indian Creek area, along with the Red Wild and Scenic River overlap with the Red River Gorge Geological Area within the project boundary. The project area on the Cumberland District of the Daniel Boone National Forest (the forest), as described and depicted above in figure 1, are collectively referred to for this project as “the Gorge”. The proposed project and associated activities as described above may affect the human environment including soils, hydrologic resources, fisheries, terrestrial wildlife, botanical resources, scenery, historic and archaeologic resources, recreation opportunities and experiences, and designated areas including wilderness, a wild and scenic river, and an inventoried roadless area.

Additional resource-specific information about the potentially affected environment and existing condition is available above in [Environmental Impacts](#) sections above, in associated resource analyses in the project record, and in the River Values Evaluation for the Red Wild and Scenic River (USDA Forest Service 2021b).

Degree of Effect

1. Both short- and long-term effects.

Anticipated effects are described above in the [Environmental Impacts](#) section and in more detail in resource specialists’ analyses. Overall, project activities are expected to have both short and long-term effects to all resources analyzed, with long-term effects protecting and enhancing river values and resources through sediment reduction and water quality improvement, and protection and restoration of native vegetation and soils, while providing for recreation opportunities and protecting and enhancing scenery in the project area. Short-term effects include some potential disturbance of soil, vegetation, and wildlife during and immediately following project implementation, as well as impacts to scenic values until vegetation recovers following construction activities. Recreationists may also experience some impacts during construction activities and with reduced opportunities for dispersed unmanaged recreation. However, most recreationists will benefit in both the short and long-term from new and improved infrastructure and improved resource conditions from designation of campsites, trails, construction of boat launches, river access points, and visitor amenities, and proposed restoration activities. While the project would have some positive and negative effects to qualities of wilderness, improved resource conditions from restoration activities and campsite designation would benefit the wilderness character in the long-term. Project design elements listed in Appendix A would protect resources including heritage and archaeological resources and ensure that effects from proposed activities do not approach any thresholds for significance for any of the resources present in the project area.

2. Both beneficial and adverse effects.



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Anticipated effects are described above in the Environmental Impacts section and in more detail in cited specialists' analyses. Overall, effects are expected to be beneficial to all resources in the project area, with short-term negative impacts expected during and following implementation for scenery, soils, water quality, vegetation, wildlife, and some recreation users. Proposed activities were developed to benefit all resources in the long-term, protecting and enhancing river values and reducing and restoring visitor impacts to soils, vegetation, and archaeological and historical resources in the project area. Water quality will benefit from reduced sediment load, and scenery will improve as vegetation recovers and user impacts are restored. Proposed recreation management will benefit most recreation users, enhancing resource conditions enjoyed by recreationists while providing infrastructure to support various recreation activities including hiking, boating, river access, and camping.

3. Effects on public health and safety.

The project is designed to improve public safety in the Gorge by providing infrastructure and designating campsites and trails for safe access in the project area. Improvements to water quality from proposed activities would have a beneficial impact on public health for swimmers and those recreating in the water within the Gorge. Project design elements listed in Appendix A, such as Rec-7, Rec-17, and Water-2, provide additional protections for public health and safety associated with proposed infrastructure and activities.

4. Effects that would violate Federal, State, or local law protecting the environment.

No effects are anticipated that would violate Federal, State, or local law protecting the environment. See the [Other Law, Regulation, and Policy Consistency](#) section above for rationale for consistency with relevant laws, regulations, and policies.

Appendix A: Project Design Elements

Table 5. Project Design Elements

Design Element Label	Design Element Description	Source
Rec-1	<p>Minimize needs for additional site work and infrastructure. Prior to developing new sites, consider the ability to modify existing developed recreation sites to meet the program objectives.</p> <p>Consolidate developed facilities where possible and to align the amount of infrastructure that can be sustained with appropriated and leveraged financial capacity.</p>	<p>FSM 2333 Site and Facility Design FSH 2309.13 – Recreation Site Handbook, Chapter 10 – Planning and Design of Developed Recreation Sites and Facilities</p> <ul style="list-style-type: none"> • 11.11b - Site Selection • 10.3 – Policy
Rec-2	Follow Forest Service accessibility guidelines. Where practicable, make all new and modified recreation improvements fully accessible.	<p>Architectural Barriers Act, FSTAG, and FSORAG (https://www.fs.usda.gov/managing-land/national-forests-grasslands/accessibility/resources) FSM 2333 Site and Facility Design</p>
Rec-3	All trail and recreation site improvements must meet or exceed the Recreation Opportunity Spectrum classes assigned to the Red River Gorge Geological Area, Indian Creek Area, and Clifty Wilderness.	<p>Forest Plan Prescription Areas Standards: Chapter 3: 1.C-REC-5, 1.E-REC-5, 1.G-REC-4, 1.K-REC-1, 3.A-REC-1, 3.C.1-REC-1, 3.C.3-REC-5, 3.E-REC</p> <p>FSM 2333 Site and Facility Design</p>
Rec-4	The size of trailhead facilities should match the development scale and the capacity identified for the river corridor.	<p>FSH 2309.18 – Trails Management Handbook Chapter 20 – Trail Development</p> <ul style="list-style-type: none"> • 22.41 - Trailhead Location <p>Wild and Scenic Rivers Act (Capacity Analysis)</p>
Rec-5	All designated trails must meet Forest Service trail standards and specifications and Trail Management Objectives . Trails within Clifty Wilderness and Wolfpen Inventoried Roadless Area shall be managed no greater than class 2. Most trails elsewhere in the Gorge will be managed as trail class 2 or 3 to facilitate access to the most heavily used recreation sites, and classes 4 and 5 as needed and practicable to facilitate accessibility.	<p>FSM 2353.12 Trail Management Objectives</p> <p>USDA Forest Service trail standards and specifications Trail Management Objectives</p>
Rec-6	Designated campsites must be located greater than 100 feet from the base of any cliff or the back of any rockshelter.	Forest Plan Prescription Areas Standards: Chapter 3: 3.E-Rec-1



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Design Element Label	Design Element Description	Source
Rec-7	Designated campsites must be located greater than 100 feet from the top of any cliff to mitigate high-risk conditions and visitor safety concerns.	FSM 2333 Site and Facility Design FSH 2309.13 – Recreation Site Handbook, Chapter 10 – Planning and Design of Developed Recreation Sites and Facilities <ul style="list-style-type: none">11.11b - Site Selection
Rec-8	Provide adequate parking for designated recreation sites where feasible. Encourage alternative transportation options, such as mass transit, shuttles, or trail connections when initially sizing a parking area or considering an expansion.	FSH 2309.13 – Recreation Site Handbook, Chapter 10 – Planning and Design of Developed Recreation Sites and Facilities <ul style="list-style-type: none">13.9 Parking Areas
Rec-9	Separate parking for overnight and day use from each other where feasible and provide sufficient signage, spacing, and vehicular circulation to allow independent use of each site setting and minimize conflicts between user groups.	FSH 2309.13 – Recreation Site Handbook, Chapter 10 – Planning and Design of Developed Recreation Sites and Facilities 12.2 - Visitor Experience and Social Considerations
Rec-10	Provide visitor information about designated parking areas and locations where parking is prohibited. Sign accordingly as needed.	FSH 2309.13 – Recreation Site Handbook, Chapter 10 – Planning and Design of Developed Recreation Sites and Facilities 12.12 - Signs Federal Highways – Manual on Uniform Traffic Control Devices (MUTCD) - Section 2B.48 Placement of Parking, Stopping, and Standing Signs
Rec-11	Where practicable, use large, centralized trash receptacles or clusters of receptacles. The design and maintenance of trash receptacles should prevent access or disturbance by wildlife.	FSH 2309.13 – Recreation Site Handbook, Chapter 10 – Planning and Design of Developed Recreation Sites and Facilities 12.7 - Water, Toilets, and Waste
Rec-12	Locate toilets adjacent to existing or planned roads for ease of maintenance and access.	FSM 2333 Site and Facility Design FSH 2309.13 – Recreation Site Handbook, Chapter 10 – Planning and Design of Developed Recreation Sites and Facilities 13.1 Toilets
Rec-13	Locate toilets no further than 500 feet from the farthest front-country campsite where possible and situated to prevent formation of numerous trails from camping units to toilet facilities and to limit improper human waste disposal.	FSM 2333 Site and Facility Design FSH 2309.13 – Recreation Site Handbook, Chapter 10 – Planning and Design of Developed Recreation Sites and Facilities 13.1 Toilets



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Design Element Label	Design Element Description	Source
Rec-14	When locating toilets, consider prevailing winds for venting odors.	FSH 2309.13 – Recreation Site Handbook, Chapter 10 – Planning and Design of Developed Recreation Sites and Facilities 13.1 Toilets
Rec-15	Enough toilets should be provided to accommodate the site's capacity. As a general rule, provide one toilet riser for every 35 PAOT.	FSM 2333 Site and Facility Design FSH 2309.13 – Recreation Site Handbook, Chapter 10 – Planning and Design of Developed Recreation Sites and Facilities 13.1 Toilets
Rec-16	If topography at boat launch locations is greater than 15% slope, stairs should be constructed using native and context appropriate materials when possible.	FSH 2309.13 – Recreation Site Handbook, Chapter 10 – Planning and Design of Developed Recreation Sites and Facilities 13.5 Boat Launches
Rec-17	River access points must only be constructed in areas where it is possible to mitigate known high-risk safety conditions.	FSH 2309.13 – Recreation Site Handbook, Chapter 10 – Planning and Design of Developed Recreation Sites and Facilities 13.6 Developed Swimming Areas
Rec-18	Analyze and update INFRA Deferred Maintenance Report for facility and trail maintenance needs backlog and trends annually. Report percent change in backlog.	Forest Plan Appendix D
Rec-19	Visually monitor dispersed recreation areas and trail conditions along priority streams and rivers and document improvement in riparian environment inventory on an ad hoc basis during regular patrols by Forest Service staff.	Forest Plan Appendix D
Wilderness-1	Designated campsites in wilderness will be marked with a small natural wood sign in coordination with wilderness sign standards.	Wilderness Act of 1964, Forest Plan Recreation Standard 2.A-REC-2, FSM 2323 – Management of Other Resources in Wilderness
Wilderness-2	New restrictions or special forest orders pertaining to camping within the wilderness shall be implemented in accordance to the Minimum Requirements Analysis completed through the Minimum Requirements Decision Guide.	Wilderness Act of 1964, Forest Plan Recreation Standard 2.A-REC-2, FSM 2323 – Management of Other Resources in Wilderness Draft Minimum Requirements Decision Guide
IRA-1	Activities within any inventoried roadless area will not include any new road construction or timber harvest.	2001 Roadless Area Conservation Rule (<u>36 CFR 294 Subpart B</u>)



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Design Element Label	Design Element Description	Source
IRA-2	Hazard trees in or adjacent to designated trails and campsites in an inventoried roadless area will only be removed for health and human safety under allowed administrative uses according to the 2001 Roadless Area Conservation Rule.	2001 Roadless Area Conservation Rule (36 CFR 294 Subpart B) Forest Plan Standard DB-VEG-1
Soil-1	Minimize bare soil by concentrating use, clearly delineating use areas, installing signage, and monitoring, seeding, mulching, or hardening bare areas outside of the designated areas as needed.	Forest Service Manual Chapter 2550 Soil Management – 2551.03 – Policy
Soil-2	All parking areas need to be hardened with asphalt, gravel, or a permeable surface. Flood harden vulnerable recreation sites using gravel, concrete, or porous pavement to protect bare soils and large rocks and to delineate feature boundaries.	Forest Service Manual Chapter 2550 Soil Management – 2551.03 – Policy
Soil-3	Within 100 feet of a stream, where people are actively gathering for recreation purposes, harden and gravel where feasible to contain the disturbance footprint and reduce erosion. For example, picnic tables should be on hardened and gravel pads.	Forest Service Manual Chapter 2550 Soil Management – 2551.03 – Policy
Soil-4	At designated river access points, monitor erosion and, if slope is destabilized by use, harden using natural materials and least impactful methods.	Forest Service Manual Chapter 2550 Soil Management – 2551.03 – Policy
Soil-5	Designated campsites shall have poor to moderate expansion potential. Adjacent areas should be unsuitable for expansion due to steep slopes, rockiness, dense vegetation, and/or poor drainage.	Forest Service Manual Chapter 2550 Soil Management – 2551.03 – Policy
Soil-6	Monitor bare soil and re-vegetation at newly constructed sites when possible during the first three years using the proposed criteria in soils analysis.	Forest Service Manual Chapter 2550 Soil Management – 2551.03 – Policy
Water-1	Follow Forest Service best management practices for all ground-disturbing activities including trails, facilities, recreation sites, and road and paved area management. Within the 100-year floodplain, use low profile but stable treatments to resist higher flow water velocities, with emphasis on enhancing natural vegetative ground cover.	Clean Water Act, Wild and Scenic Rivers Act, (REC-1-5 and 8 of National Best Management Practices for Water Quality Management on National Forest Lands — Volume I: National Core BMP Technical Guide. April 2012. United States Department of Agriculture, Forest Service. FS-00a).
Water-2	Locate all designated campsite and restroom infrastructure above the 100-year floodplain based on a hydrographic floodplain analysis which would be completed before project implementation, including designated campsites, and trails where possible. This does not include river access infrastructure such as boat launches or access roads, which would be designed and located strategically within the floodplain.	Clean Water Act, Forest Service Handbook 2309.13. National Core Water Quality Management Best Management Practice Rec-2. Developed Recreation Sites



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Design Element Label	Design Element Description	Source
Water-3	Minimize development within the riparian area, in accordance with forest plan standards for riparian corridors.	Forest plan standards for 1.E Riparian Corridor
Water-4	All trails should be located or rerouted to be above the 100-year floodplain where possible. Trails in the 100-year floodplain may need a reinforced tread suitable to withstand large flood events, as well as rolling grade dips, grade reversals, debarment, abutments, and other features designed to be low profile and flood-resistant.	REC-1-5 and 8 of <u>National Best Management Practices for Water Quality Management on National Forest Lands</u> — Volume I: National Core BMP Technical Guide. April 2012. United States Department of Agriculture, Forest Service. FS-00a).
Water-5	Install water control structures along designated trails where needed to prevent erosion, such as rolling grade dips, grade reversals, and low side berms.	REC-1-5 and 8 of <u>National Best Management Practices for Water Quality Management on National Forest Lands</u> — Volume I: National Core BMP Technical Guide. April 2012. United States Department of Agriculture, Forest Service. FS-00a).
Water-6	Construct all new parking areas with drainage of impervious surfaces following best management practices, preferably directing rainfall runoff and snowmelt to where it could be absorbed by the forest floor before reaching the river.	National Core Water Quality Management Best Management Practice Fac-2, Facility Construction and Stormwater Control.
Water-7	Locate boat launches and river access points in areas without high flow velocities and to minimize erosion and impacts to fragile riparian habitats. Select sites that can withstand flow levels, currents, and exposure to elements.	FSH 2309.13 – Recreation Site Handbook, Chapter 10 – Planning and Design of Developed Recreation Sites and Facilities: 13.5 – Boat Launches; Logical Lasting Launches: Design Guidance for Canoe and Kayak Launches – National Park Service. National Core Water Quality Management Best Management Practice Rec-8. Watercraft Launches
Water-8	Locate boat launches and river access points in areas that require minimal alteration to the shoreline and do not impede the free-flowing condition of the river.	FSH 2309.13 – Recreation Site Handbook, Chapter 10 – Planning and Design of Developed Recreation Sites and Facilities: <u>13.5 - BOAT LAUNCHES</u> National Core Water Quality Management Best Management Practice Rec-8. Watercraft Launches Wild and Scenic Rivers Act



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Design Element Label	Design Element Description	Source
Water-9	Provide a firm surface for launching boats, despite changes in stream levels, in accordance with FSH 2309 chapter 13.5.	FSH 2309.13 – Recreation Site Handbook, Chapter 10 – Planning and Design of Developed Recreation Sites and Facilities: <u>13.5 - BOAT LAUNCHES</u> . National Core Water Quality Management Best Management Practice Rec-8. Watercraft Launches
Water-10	Design storm water management and green infrastructure features as landscape amenities. Use grading and drainage plans, as needed, at developed recreation sites to route snowmelt and storm water runoff to protect facilities and minimize impacts on visitors and the environment. Consider snow melt and runoff in locating facilities and camping units at developed recreation sites. Direct runoff from parking areas and off roofs of buildings to appropriate areas for infiltration. Infiltrate storm water runoff on-site utilizing Low Impact Development principles, such as micro-basins. Filter pollutants to maintain or enhance the water quality of on-site and off-site receiving water bodies. Construct road stream crossings to allow for aquatic organism passage.	12.9 - Grading and Drainage (FS Handbook 2309.12.9). National Core Water Quality Management Best Management Practice Rec-2. Developed Recreation Sites, and Road 7 (stream crossings) and 11 (Road construction and reconstruction).
Water-11	Where feasible, grade roads, parking areas, and walkways to allow for the natural flow of surface water. Grading must direct surface water flow away from tent pads, hardened areas, picnic tables, or utility hookups. When possible, surface flows may be concentrated and collected in unobtrusive areas away from forest visitors and vehicular or pedestrian traffic. Minimize drainage structures that accelerate storm water flow velocities.	12.9 - Grading and Drainage (FS Handbook 2309.12.9). National Core Water Quality Management Best Management Practice Rec-2. Developed Recreation Sites
Water-12	Use road and trail design principles to divert and disperse storm water runoff, such as rolling dips, out-sloping, and grade reversal. Out-slope roads only if the terrain and climate are favorable.	National Core Water Quality Management Best Management Practice Rec-2. Developed Recreation Sites Rec-4. Motorized and Nonmotorized Trails
Water-13	Grading adjacent to buildings must slope away from the buildings to ensure positive drainage and to eliminate standing water. Establish building finish floor elevations to prevent runoff from entering buildings while still providing accessibility.	12.9 - Grading and Drainage (FS Handbook 2309.12.9). National Core Water Quality Management Best Management Practice Rec-2. Developed Recreation Sites
Water-14	Design drainage to follow previously undisturbed patterns as much as possible. Ensure drainage features have low-profile gradients and use energy dissipating structures, such as boulders, concrete baffles, and large woody debris.	12.9 - Grading and Drainage (FS Handbook 2309.12.9). National Core Water Quality Management Best Management Practice Rec-2. Developed Recreation Sites



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Design Element Label	Design Element Description	Source
Water-15	Drainage system designs should incorporate the use of smaller inlet structures at closer intervals within a collection basin in lieu of a few larger inlet structures that would concentrate flows and thereby interfere with the use, hydrology, or aesthetics of an area.	12.9 - Grading and Drainage (FS Handbook 2309.12.9)
Water-16	Recreational infrastructure such as boat ramps and constructed river access sites should access the river in areas that are most geo-morphically stable. In general, locate boat launches and other river access infrastructure in areas where the channel is essentially straight, even for a few hundred feet, with no visible signs of upstream or downstream bank erosion. Infrastructure located in these channels is most likely to be sustainable long term and avoid direct and adverse effects to flow. Intact trees on stream banks are a good sign for existing and future stability.	Wild and Scenic Rivers Act, Section 7
Water-17	Boat ramps made of hollow logs and large stone access stairs built flush with the slope are a good practice for long term stability because of the low profile structure that is flush with the banks, as demonstrated by the Copperas river access design site stability.	Wild and Scenic Rivers Act, Section 7
Water-18	At river access sites, active restoration using native vegetation is required. Native vegetation should be used for bank stabilization.	Wild and Scenic Rivers Act, Section 7
Water-19	<p>Design roads across the valley floor needed to access the river access points to:</p> <ul style="list-style-type: none">a. Stay on higher ground in the flood plain and take a direct route to the river.b. Where possible, use roadbed materials, such as gravel, pavement, or asphalt, that can resist flooding.c. Withstand being flooded over, with an upper surface less than a foot above the surrounding floodplain to prevent downstream scour.d. Have widely spaced small boulders to define the road surface and turn around where needed.e. Include maintenance plans for after infrequent floods to address deposited sediments on flood plains.	Wild and Scenic Rivers Act, Section 7



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Design Element Label	Design Element Description	Source
Water-20	Consider using barriers to prevent beach access in sensitive erosion-prone areas (such as Jump Rock) that direct access to preferred areas. Preferred barriers are low stable features that can survive flooding.	Wild and Scenic Rivers Act, Section 7
Water-21	Rock rip rap is not recommended along the Red River channel but may be used in certain locations along roads or other areas, primarily above the floodplain to protect resources and provide for public health and safety. Rock rip rap along the river will encourage bank and bed scour due to easily eroded bed and bank features. Alternatives to rock rip rap such as revegetation are recommended for river access improvements to avoid a direct and adverse impact to the channel.	Wild and Scenic Rivers Act, Section 7
Scenery-1	Where feasible, use natural materials for site construction, improvement, or rehabilitation to complement the scenery.	FSH 2309.13 Chapter 10
Scenery-2	Capitalize on the unique character of the landscape. Designs should express the inherent beauty of the site and should yield facilities that provide enjoyment for visitors but are simple to maintain, sturdy, safe, and appropriate for the applicable ROS setting. Facilities should visually harmonize with the surrounding landscape as much as possible in accordance with the site's scenery management objectives and the Built Environment Image Guide (BEIG).	FSH 2309.13 Chapter 10, Section 12.3; FS-710 The Built Environment Image Guide for the National Forests and Grasslands
Scenery-3	<p>Design all sites together to be a sequence of spaces that function as a network. Have a plan for the whole river corridor and Gorge, where individual sites complement the vision.</p> <p>Create design guidelines for developing a coherent look and vision for the river corridor and Gorge that meets the BEIG and complements the scenic setting.</p>	Forest Plan scenery management direction; FS-710 The Built Environment Image Guide for the National Forests and Grasslands
Scenery-4	Use the services of a landscape architect(s) in planning and design of the built environment, following the Built Environment Image Guide, with focus on pages 125-137.	FSH 2309.13 – Recreation Site Handbook, Chapter 10 – Planning and Design of Developed Recreation Sites and Facilities; FS-710 The Built Environment Image Guide for the National Forests and Grasslands
Scenery-5	Design restoration and rehabilitation projects in the river corridor to enhance the scenery outstandingly remarkable value.	Wild and Scenic Rivers Act, <i>Forest Plan 3.C.3-Goal 2.</i>



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Design Element Label	Design Element Description	Source
Scenery-6	<p>Maintain as much vegetation as possible around designated campsites, toilets, parking, picnic sites, and other amenities for screening, privacy, etc.</p> <p>When planting is necessary, prepare a vegetation management plan to create and maintain a natural appearing environment that emulates the existing landscape. Include locations and specifications for planting trees, shrubs, and ground cover in site plans when needed for erosion control, screening, site construction restoration, to provide shade, aesthetics, noise reduction, and as a natural traffic control barrier.</p>	FSH 2309.13 Chapter 10
Scenery-7	All architectural elements should be consistent with the Built Environment Image Guide (BEIG) and concepts.	FSH 2309.13 Chapter 10 FS-710 The Built Environment Image Guide for the National Forests and Grasslands Chapter 4.4 The Southeast Mountain Province
Scenery-8	When non-native materials are used, such as for site armoring, use them strategically and proportionately. Use native plants and native materials in conjunction with non-native materials to ensure a natural, aesthetically pleasing appearance to the riverbank.	Scenery ORV
Scenery-9	Minimize grading cuts and fills and use topography and retaining walls to maintain or maximize natural characteristics of the site, create visual buffers or screens, and intrude as little as possible on the landscape.	FSH 2309.13 Chapter 10; Forest Service Manual 7721.1
Scenery-10	<p>New transportation, parking, and visitor amenities should be small in scale to reduce visual fragmentation. Desirable, native vegetation should be established and maintained with a vegetation management plan.</p> <p>Avoid placing new vehicle parking between areas with views and dominant view attraction.</p> <p>Locate parking areas to conform to the terrain and vegetation. Break up large parking areas with topography and screening where feasible, providing a series of connected smaller parking areas rather than a single very large parking area.</p>	FSH 2309.13 Chapter 10
Scenery-11	Native rock should be used as barriers at trailheads and parking areas. If guardrails are necessary along roadways, they should be constructed with natural-appearing, non-reflective elements such as weathered steel.	Forest Plan scenery management direction; Scenery ORV BEIG



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Design Element Label	Design Element Description	Source
Scenery-12	Ensure boat launches and river access points blend into the riverbank setting and are restored with native plants to the extent possible. Build to the lowest scale possible.	Forest Plan scenery management direction; Scenery ORV
Scenery-13	Place dumpsters on colored concrete pads with color to mimic forest duff. Use natural weathered wood fencing as enclosure to provide screening from roadways. Dumpsters must be black or dark brown color only. Use native plant materials around fencing to create a natural appearance.	FSH 2309.13 Chapter 10 FS-710 The Built Environment Image Guide for the National Forests and Grasslands Chapter 4.4 The Southeast Mountain Province
Wildlife-1	All new trails or trail reroutes will be evaluated for impacts to PETS species to prevent significant effects to these species or their habitat.	Endangered Species Act; Forest Service Manual 2670.2-2670.3, 2672.4
Wildlife-2	Year-round, all work utilizing heavy equipment will begin at least one hour after sunrise and cease one hour before sunset to minimize disturbance to foraging bats and reduce the risk of crushing amphibians and nocturnal small mammals.	Endangered Species Act; Forest Service Manual 2670.2-2670.3
Wildlife-3	Cutting or removal of all trees or branches 3 inches or greater diameter at breast height (DBH) must be cleared by the District Biologist prior to implementation.	Northern Long-eared Bat 4d Rule and Biological Opinion, Forest Plan Standards DB-WLF-8, DB-WLF-9, DB-WLF-12, 1.J-VEG-2, 1.J-VEG-3
Wildlife-4	Outside of the Cliffline Community Prescription area, no new recreation site construction will occur within a minimum of 200 feet of cave or mine openings, except for designated recreation caves.	Forest Plan Standard DB-WLF-13, Forest Plan Standard 1.J-REC-1
Wildlife-5	In the Cliffline Community Prescription Area, siting of new campsites, trails, re-routed trails, and other recreation sites will be evaluated by the district biologist prior to implementation to prevent concentration of public use that will be detrimental to PETS species or habitat for conservation species.	Forest Plan Standard 1.C-WLF-2, Forest Plan Standard 1.J-REC-1
Wildlife-6	Active peregrine falcon nesting sites in the Cliffline Community Prescription Area will be protected from human disturbance between February 1 and June 30.	Forest Plan Standard 1.C-WLF-3
Wildlife-7	In-stream substrate disturbance by mechanical equipment will be prohibited from February 1 through July 31 if aquatic PETS species are determined to occur within one-quarter mile upstream and one mile downstream of the project site.	Forest Plan Standard 1.E-WLF-1



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Design Element Label	Design Element Description	Source
Wildlife-8	Campsites will be located no less than 200 feet from an opening to posted colony sites for PETS bat species.	Forest Plan Standard 1.J-REC-1, Forest Plan Standard 1.J-REC-2
Wildlife-9	Recreational facilities that will be sited within the riparian corridors of the Red River, the Middle Fork of the Red River, and their larger tributaries will be evaluated to ensure cornsnake habitat is preserved.	Forest Plan Standards 1.E-WLF-4, 1.G-REC-2, 1.G-REC-3, 1.G-REC-3
Wildlife-10	When and where practical, minimize herbicide use and spot treat non-native invasive species (NNIS) plant infestations to protect monarch butterfly and other Regional Forester Sensitive pollinator species' habitats. Apply in such a way that minimizes drift.	Forest Service Manual 2670.2-2670.3
Wildlife-11	Recreational sites may be seasonally closed if bald eagle nesting activity is observed. New recreation sites will not be placed in areas that will create conflicts with bald eagle nesting.	Bald and Golden Eagle Protection Act
Fish-1	For any stream crossings along designated trails, do not construct structures or place rocks in the channel to impede the free-flowing characteristic and restrict fish movement. Maintain stream channel contour and grade when modifying a crossing. Armor the bottom with materials that will provide for movement of fish.	Forest Plan Prescription Area Standards: 1.E-ENG-2
Fish-2	Protect riparian vegetation to restore ecosystem health and provide fish and wildlife habitat.	Forest Plan Prescription Area Standards: 3.C.3-VEG-1.
Fish-3	Do not construct new trails for bicycles, horses, and other non-pedestrian modes of transportation within riparian corridors, except to approach and cross at designated sites, or where the trail location requires some encroachment (e.g. to accommodate steep slopes).	Forest Plan Prescription Areas Standards: Chapter 3 - 1.E-REC-1
Arch-1	All trails should be located or rerouted to be 100 feet or more from the base of a cliff, back of a rockshelter, and known historic and cultural sites.	NHPA SEC.106; Forest Plan Standard 3.C.3-REC-1
Arch-2	All existing trails that currently intersect NRHP-eligible historic properties should be rerouted to avoid them. All new trails should be built so they avoid NRHP-eligible historic properties.	NHPA SEC.106; Forest Plan Standard 3.C.3-REC-1



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Design Element Label	Design Element Description	Source
Arch-3	New infrastructure and modifications to existing infrastructure will avoid NRHP-eligible historic properties. Efforts to protect sites will be done in consultation with SHPO.	NHPA SEC.106; Forest Plan Standard 3.C.3-REC-1
Arch-4	Restoration activities in campsites, unauthorized or degraded climbing routes, unauthorized trails ("user trails"), and closed system trail segments will avoid impacting NRHP-eligible historic properties. Efforts to protect sites will be done in consultation with SHPO.	NHPA SEC.106; Forest Plan Standard 3.C.3-REC-1
Arch-5	<p>The forest will monitor secondary effects to historic and archaeological resources from new infrastructure (tent pads, trails, parking areas) in proximity to those sites, taking actions including law enforcement and those described below when thresholds are reached.</p> <p>First occurrence: cultural resources survey to evaluate whether it is an archaeological site; if a site, record it and report to SHPO, following SHPO standards including a detailed plan view map of site or shelter surface and photographs showing compacted area to track change with future monitoring.</p> <p>Second occurrence: if monitoring reveals user activity continues to disturb a documented site, install metal wire fence to block foot traffic.</p> <p>Third occurrence: if metal fencing cannot prevent continued use, evaluate site for National Register of Historic Places eligibility (Phase II investigation). .</p>	NHPA SEC.106; Forest Plan Standard 3.C.3-REC-1
Botany-1	Document invasive species along designated trails and at designated campsites for the first three years after implementation for infestation change. Monitor a subset after the three-year period as time and funding allow.	Forest Plan, 1.E-Goal 2.; 1.E-Objective 2.F; Objective 2.3.B; Objective 2.3.C Forest Service Manual 2900
Botany-2	Treat non-native invasive species infestations of greater than 10 square feet. Treat all sites of Japanese chaff flower (<i>Achyranthes japonica</i>) and fig buttercup (<i>Ranunculus ficaria</i>). The forest botanist will prioritize other sites based on forest priority and available funding.	Forest Plan, 1.E-Goal 2.; 1.E-Objective 2.F; Objective 2.3.B; Objective 2.3.C Forest Service Manual 2900



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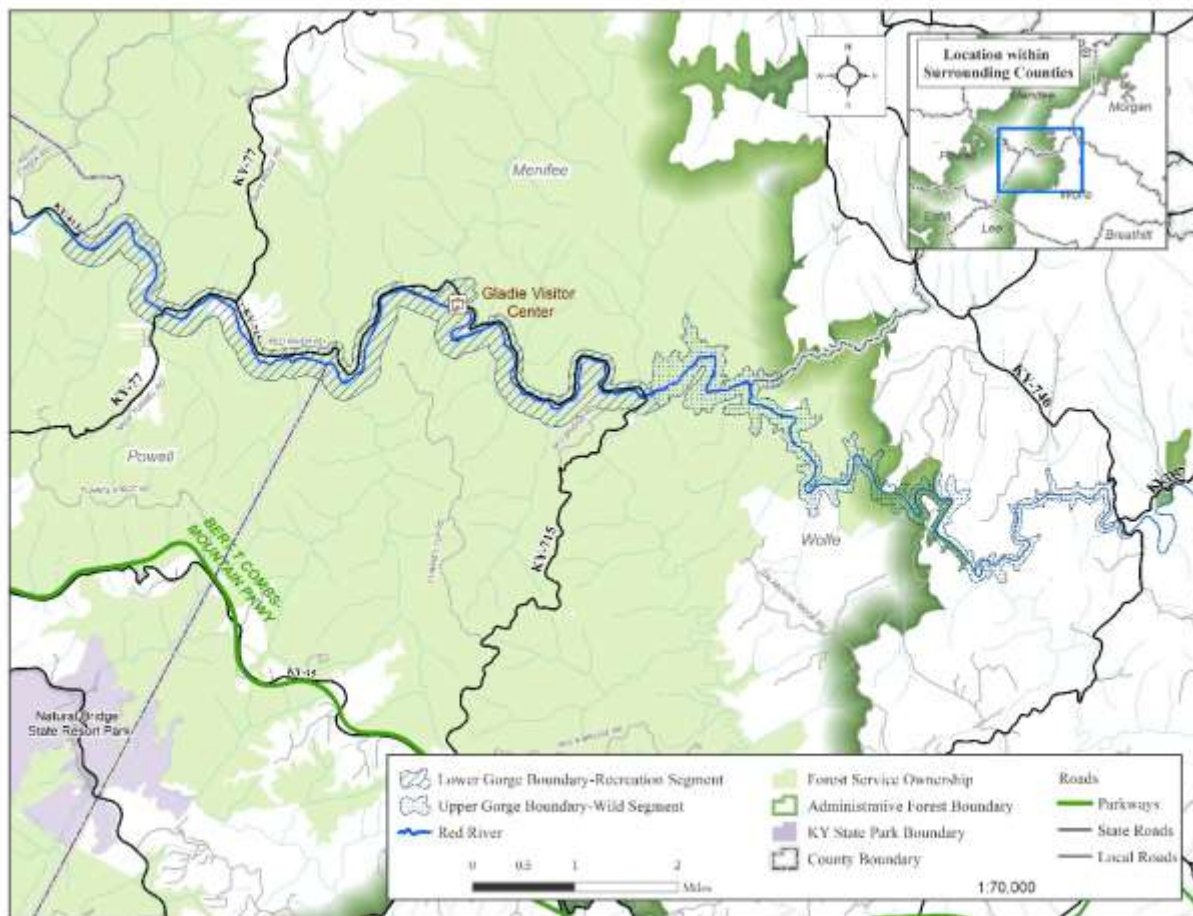


Design Element Label	Design Element Description	Source
Botany-3	Revegetate bare soil areas in the Red River corridor which exceed 100 square feet. Use native species for revegetation, in addition to cereal grasses, and consider native pollinator host plants. Cereal grasses are appropriate in areas that need immediate stabilization, or areas where natives will not establish well immediately.	Forest Plan, 1.E-Goal 2.; 1.E-Objective 2.F; also see Soil above Forest Service Manual 2900
Botany-4	Survey proposed construction areas in the appropriate survey period prior to construction for TES plants.	Forest Plan, 1.E-Goal 2.; Goal 1.1 Forest Service Manual 2670
Botany-5	Where canebreaks are present, evaluate site for promoting growth at the site for cane collection and stabilization. When removing cane for access to sites, replant cane for stabilization purposes.	Forest Plan, 1.E-Objective 2.D; 1.G-Objective-1.G; 1.G.VEG-CANE-1

Appendix B: Additional Maps and Tables

Figures and tables below provide additional information and possible locations for proposed management actions. Figures 8 and 9 below depict locations of proposed activities under consideration within the Gorge. Figure 8 shows corridors for proposed front country activities listed in tables 2 and 4 in the Environmental Assessment and table 8 below, including designated front country campsites, designated trails, parking, shuttle stops, picnic sites, and restrooms. Figure 9 shows potential locations for proposed management actions within the Red Wild and Scenic River corridor, including proposed boat launches, river access points, parking, shuttle stops, restrooms, and picnic sites. Site-specific locations for these activities will be identified and updated as needed following resource surveys, using project design elements listed in [Appendix A](#), and based on conditions at the time of implementation.

Figure 6. Red Wild and Scenic River Proposed Boundary and Vicinity Map



This map illustrates the Red River area, highlighting designated equestrian and bicycle use zones. The map includes the following details:

- Legend:**
 - Equestrian Use Area
 - Equestrian and Bicycle Use Prohibited
 - Forest Service Ownership
 - County Boundary
- Scale:** 1:100,000
- Geographic Labels:** Menifee, Powell, Wolfe, Rogers, Slade, Glade Visitor Center, Natural Bridge State Resort Park, Bert T. Combs Mountain Parkway, Red River, KY-77, KY-715, KY-11, Tunnel Ridge Rd, Lone Bridge Rd, Rock Bridge Rd, and various other local roads.
- Map Features:** The map shows the Red River flowing through the region, with designated equestrian and bicycle use areas highlighted in yellow and orange. Forest Service ownership is indicated by green shading. County boundaries are shown as dashed lines.

Figure 8. Corridors for Proposed Front Country Management Actions (corresponds with table 8 below)

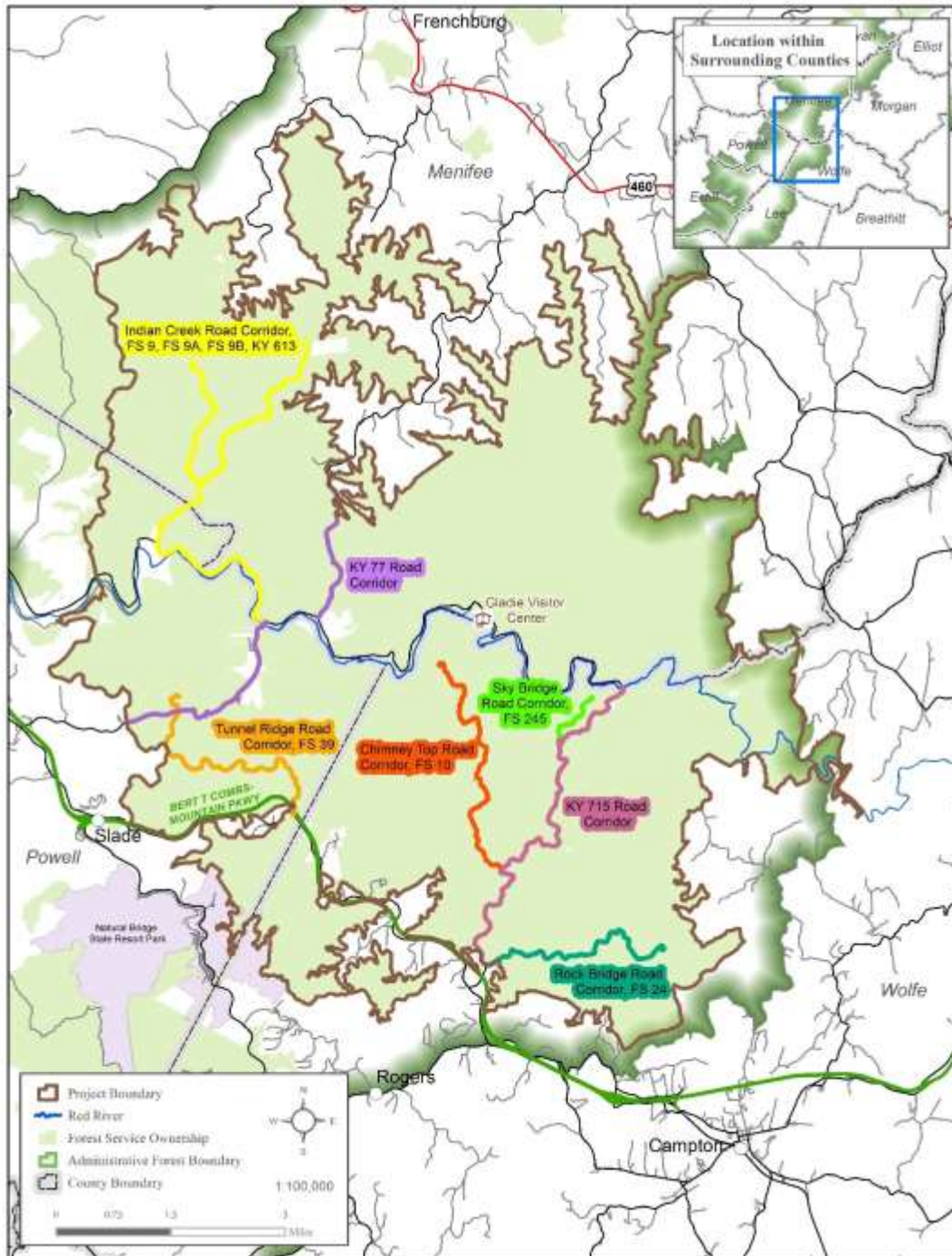


Figure 9. Proposed Management Actions within the Red Wild and Scenic River Corridor

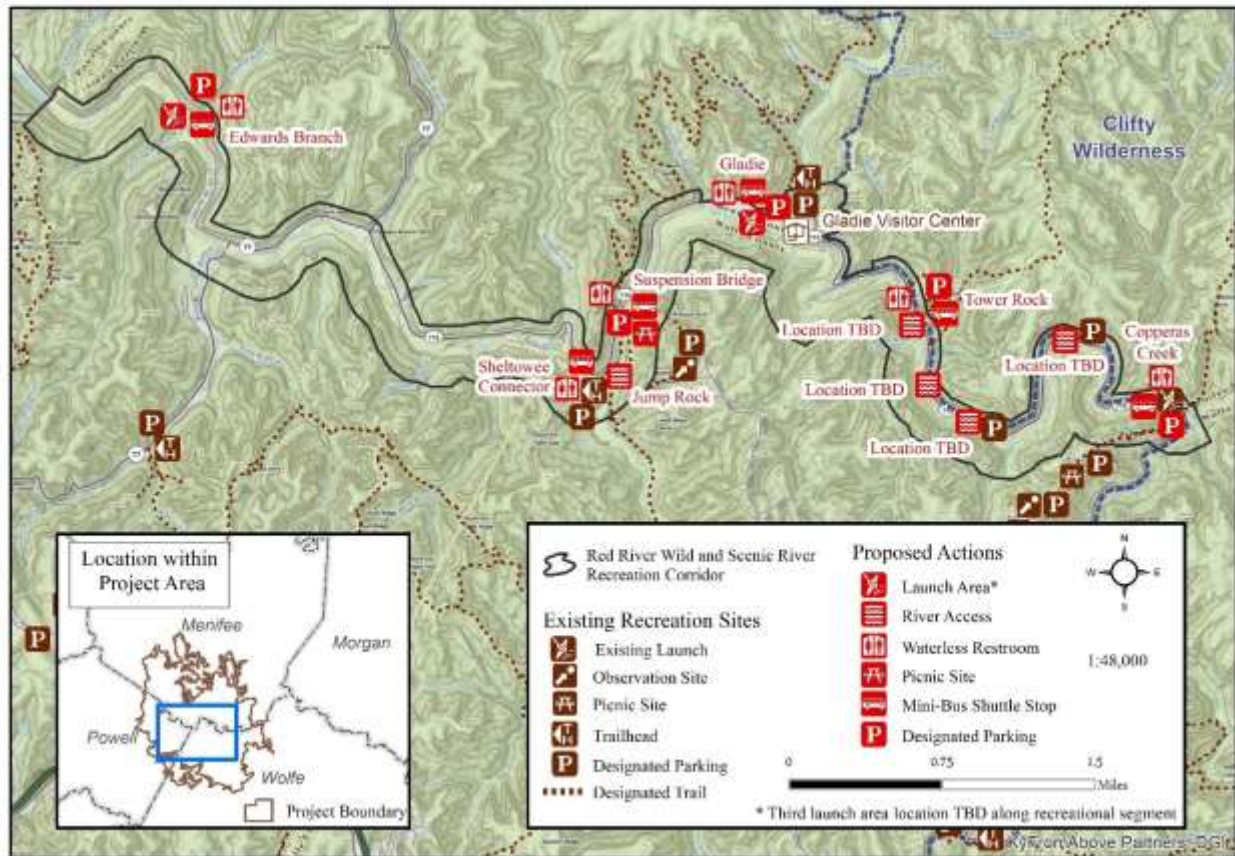


Table 6. Recreation Site Development Scale (Forest Service Handbook 2309.13 Chapter 10.8)

Development Scale	Typical Recreation Opportunity Spectrum (ROS) Consistency	Typical Site & Facility Characteristics	Typical Management Emphasis
0	May occur in any ROS setting	<ul style="list-style-type: none"> User-created dispersed use No FS investment or amenities 	May include monitoring of resource conditions
1	May occur in any ROS setting	<ul style="list-style-type: none"> Primarily user-created dispersed use area Informal vehicle circulation and parking 	Resource protection

Development Scale	Typical Recreation Opportunity Spectrum (ROS) Consistency	Typical Site & Facility Characteristics	Typical Management Emphasis
		<ul style="list-style-type: none"> Minimal FS investment, may include signage 	
2	May occur in any ROS setting	<ul style="list-style-type: none"> Defined vehicle circulation and parking with minimal FS investment to accommodate user-created dispersed use area Limited amenities may include signage, tables, fire rings. In rare instances may include vault toilet 	Resource protection
3	Roaded Natural	<ul style="list-style-type: none"> Designed developed site with significant FS investment and delineation Amenities may include signage, fire rings, tables, toilet, waste collection, potable water Roads are surfaced; maintenance level 3 or 4 	Visitor comfort & Resource protection
4	Roaded Natural, Rural, Urban	<ul style="list-style-type: none"> Designed developed site with significant FS investment and delineation Amenities include signage, interpretive materials, fire rings, grills, tables, waste collection, potable water, flush toilets Roads, parking, and paths are surfaced and may be paved; maintenance level 4 or 5 	Visitor comfort, Resource protection
5	Rural, Urban	<ul style="list-style-type: none"> Designed developed site with significant FS investment and delineation 	Visitor comfort, Resource protection



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Development Scale	Typical Recreation Opportunity Spectrum (ROS) Consistency	Typical Site & Facility Characteristics	Typical Management Emphasis
		<ul style="list-style-type: none"> Amenities typically include signage, interpretive displays, fire rings, grills, tables, waste collection, potable water, flush toilets. May include utility hook-ups, showers, and laundry facilities. Roads, parking, and pathways are clearly delineated and are often paved; maintenance level 4 or 5. 	

Table 7. Proposed Group Campsites, Amenities, and Impact Areas

Group Campsites	Maximum Per Front-Country Site	Maximum Total (all front-country sites)	Maximum Per Backcountry Site	Maximum Total (all back-country sites)	Totals (all group sites)
Maximum Proposed Sites		14 sites		10 sites	24 sites
Maximum Occupancy	15-30 people	420 people	20 people	200 people	620 people
Timber and Gravel Tent Pads (up to 24 x 48 foot)	2	28	N/A	N/A	28
Tent Pad Square Footage	2,302 square feet	64,512 square feet	N/A	N/A	64,512 square feet
Picnic Tables	4	56	N/A	N/A	56
Fire Rings (with 24-foot diameter fire)	2	28	N/A	N/A	28



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Group Campsites	Maximum Per Front-Country Site	Maximum Total (all front-country sites)	Maximum Per Backcountry Site	Maximum Total (all back-country sites)	Totals (all group sites)
circle and benches)					
Campsite Size and Area	50 feet x 100 feet = 5,000 square feet	70,000 square feet	50 feet x 50 feet = 2,500 square feet	25,000 square feet	95,000 square feet
ROS	Roaded Natural, Rural		Roaded Natural, Semi-primitive Non-Motorized		
LAC	Roaded Natural, Concentrated Use		Primitive, Semi-Primitive, and Concentrated Use		
Development Level	3		2		
Potential Locations	Tunnel Ridge Road, Tunnel Ridge – Woodland Chimney Top Road, Rock Bridge Road, Indian Creek Area, Indian Creek 9B, Chimney Top Road, Sky Bridge Picnic Area		Klaber Ridge, Koomer Ridge, Osborne Bend Ridge, Auxier Ridge, Rush Ridge, Hanson's point		



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Table 8. Proposed Front Country Management Actions by Road Corridor (See Figure 8 above)

Potential Location	Maximum Additional Designated Parking Spaces	Shuttle Stops	Picnic Sites	Unisex Restrooms	Front Country Campsites (within 1 mile of roads)
Chimney Top Road Corridor, FS 10	140	2	5	10	38
Indian Creek Road Corridor, FS 9, 9A, 9B, KY 613	140	6	10	6	25
Rock Bridge Road Corridor, FS 24	70	1	5	4	15
Sky Bridge Road Corridor, FS 245	0	1	0	0	5
Tunnel Ridge Road Corridor, FS 39	40	2	0	1	42
KY 715 Road Corridor	90	12	30	12	0
KY 77 Road Corridor	30	3	5	2	0
TBD/Other	20	1	5	1	20
TOTALS	530	28	60	36	145



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Table 9. Potential Locations for Transportation, Parking, and Visitor Amenities

Potential Location	Maximum Additional Designated Parking Spaces	Maximum Shuttle Stops	Maximum Picnic Sites	Maximum Restrooms
Copperas Creek	15	1	N/A	1 double
KY 715 at proposed river access points (4 locations)	10 at each location (40 total)	1 at each location (4 total)	5 at each location (20 total)	1 single at each (4 total)
Bell Falls	10	1	N/A	1 single
Gladie Area/ Bison Viewing Fields (launch)	10	2	N/A	1 single
Suspension Bridge	10	1	5	1 double
KY 77/715 Intersection (near proposed boat launch)	20	1	5	1 single
Sheltowee Connector	5	1	5	1 double
Edwards Branch (launch)	20	1	5	1 double
Indian Creek 9, 9A, and 9B	120	5	10	4 double 2 single
Tunnel Ridge Road	40	2	0	1 double
Chimney Top Road	140	2	5	7 double 3 single
Rock Bridge Road	70	1	5	3 double 1 single



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Potential Location	Maximum Additional Designated Parking Spaces	Maximum Shuttle Stops	Maximum Picnic Sites	Maximum Restrooms
Tarr Ridge	15	1	0	1 single
Martin's Fork	15	1	0	0
Nada Tunnel	0	1	0	0
Sky Bridge Recreation Area	0	1	0	0
Lower Swift Camp Creek	0	0	0	1 single
KY 715 Rough/Swift Creek Trailhead	0	1	0	1 double
Wildcat Trailhead	0	1	0	1 single

Table 10. Potential Hardening and Stabilization Sites

Location	Area (sq. ft.)	Management Area	Development Scale	ROS Class
Fortress Wall	1,8771	RRGGA	0-4	Roaded Natural
Phantasia	33,326	RRGGA	0-4	Roaded Natural
Military Wall	30,013	RRGGA	0-4	Roaded Natural
Left Flank	12,258	RRGGA	0-2	Semi-Primitive Non-Motorized
Dip Wall	8,616	Indian Creek Area	0-4	Roaded Natural



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Location	Area (sq. ft.)	Management Area	Development Scale	ROS Class
Purple Valley	25,756	Indian Creek Area	0-4	Roaded Natural
Long Wall	65,463	Indian Creek Area	0-4	Roaded Natural
Eagle Point	24,284	Clifty Wilderness	0-2	Primitive
Funk Rock City	36,293	Clifty Wilderness	0-2	Primitive
Tower Rock	6,470	Clifty Wilderness	0-2	Primitive
Moonshiner's Wall	1,042	Clifty Wilderness	0-2	Primitive
Doorish Wall	5,259	Clifty Wilderness	0-2	Primitive

Appendix C: References

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